Exploring the barriers to generating compassionate imagery in individuals diagnosed with a personality disorder: The role of adverse childhood experiences, self-compassion and current affect

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Thesis declaration form

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

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OVERVIEW

This thesis is presented in three distinct sections:

Part one consists of a systematic literature review that explores the relationship between self-compassion and the severity of post-trauma psychopathology. A total of 18 studies were examined and reviewed. The findings of this review demonstrated that lower self-compassion is associated with poorer post-traumatic outcomes which include higher levels of post-traumatic stress disorder symptoms, depression, anxiety, eating disorders, substance abuse and suicidality.

This thesis was conducted as part of a joint project with another student who was also completing her clinical psychology doctorate at UCL (Naismith, 2016). Part two presents an empirical paper that explored whether adverse childhood experiences (ACEs), current affect and self-compassion were predictive of the ability to generate compassionate imagery in individuals diagnosed with a personality disorder. General imagery vividness, negative mood and the negative psychological impact of ACEs were related to difficulties with generating compassionate imagery. Levels of self-compassion improved after one-week of practising the imagery exercises. The distressing impact of childhood trauma may need to be addressed prior to engaging some individuals with a personality disorder in standard forms of compassion focussed therapies.

Part three of this thesis consists of a critical appraisal of the work. It specifically highlights the importance of considering the emotional impact of this work on the researcher. The emotional reactions can be conceptualised as a catalyst that activates development of compassionate ways of working with stigmatised groups, specifically those that have received a diagnosis of a personality disorder.

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Tables and Figures

Acknowledgements

TABLE LISTING TEST ACRONYMS

Acronym	Full scale name	Author(s)
AAQ-II	Acceptance and Action Questionnaire-II	Bond et al., (2011)
AUDIT	Alcohol Use Disorders Identification Test	Babor, Higgins-Biddle, Saunders & Monterio, (2001)
BASIS-SMS	Behaviour and Symptom Identification Scale	Eisen et al., (1994)
BSI	Brief Symptom Inventory	Derogatis & Melisaratos, (1983)
CAPS	Clinician-Administered PTSD Scale for DSM-IV	Blake et al., (1995)
CES	Centrality of Event Scale	Berntsen & Rubin, (2006); Portuguese version by Matos, Pinto-Gouveia, & Gomes, (2010)
CES-D	Center for Epidemiologic Studies Depression Scale	Radloff, (1977)
CHQ	Childhood History Questionnaire	Milner, Robertson, & Rogers, (1990)
CRAFFT	Substance abuse (Car, Relax, Alone, Forget, Friends, Trouble)	Knight, Sherrit, Shrier, Harris & Chang, (2002)
CTQ[a]	Childhood Trauma Questionnaire	Bernstein et al., (2003)
CTQ[b]	Carmel Trauma Questionnaire	Zeller et al., (2014)
DASS-21	The Depression, Anxiety, Stress Scale	Lovibond and Lovibond, (1995)
DERS	Difficulties with Emotional Regulation Scale	Gratz & Roemer, (2004)
EDE-16.0D	Eating Disorder examination 16.0D	Fairburn, Cooper, & O'Connor, (2008)
EMWS	Early memories of Warmth Scale	Richter, Gilbert & McEwan, (2009)
FCES	Full Combat Exposure Scale	Hoge et al., (2004)
FCS-SC	Fear of Compassion Scales-Self-Compassion	Gilbert et al., (2011)
FEQ	Family Experiences Questionnaire	Briere & Runtz, (1990)
GAD-7	Generalised Anxiety Disorder-7	Spitzer, Kroenke, Williams, & Lowe, (2006)
GHQ	General Health Questionnaire	Goldberg & Blackwell, (1970); Goldberg & Williams, (1988)
ICES	Invalidating Childhood Environments scale	Mountford, et al., (2007)
IDAS	Inventory of Depression and Anxiety	Watson et al., (2007)
IES-R	Impact of Event Scale-Revised	Weiss & Marmar, (1997); Portuguese version by Matos, Pinto-Gouveia, & Martins, (2011)
JVQ	Juvenile Victimisation Questionnaire	Finkelhor et al., (2005)
LEC-5	Life Events Checklist-5	Weathers, Blake, Schnurr, Kaloupe, Marx & Keane, (2013)
LESS	Leahy Emotional Schema Scale	Leahy, (2002)
MAAS	Mindful Attention Awareness Scale	Brown & Ryan, (2003)
MCMI-III	The Millon Clinical Multiaxial Inventory-III	Millon et al., (1994)
MOPS	The Measure of Parenting Style	Parker et al., (1997)
MSPSS	Multidimensional Scale of Perceived Social Support	Zimet, Dahlem, Zimet & Farley, (1988)

OSDUHS	The Ontario Student Drug Use and Health Survey	http://www.camh.net/research/osdud.html
PANAS	Positive and Negative Affect Schedule	Watson, Clark, & Tellegen, (1988)
PCL-5,	PTSD Checklist-5 for DSM 5	Weathers, Litz, Keane, Palmieri, Marx & Schnurr, (2013)
PCL-C[a]	PTSD Checklist for DSM IV	Weathers, Litz, Herman, Huska, & Keane, (1993)
PCL-C[b]	PTSD Checklist-Civilian Version	Weathers et al., (1994)
PDS	Posttraumatic Stress Diagnostic Scale	Foa, Cashman, Jaycox & Perry, (1997)
PHQ-8	Patient Health Questionnaire - 8	Kroenke et al., (2009)
PSDS	PTSD Screening Diagnostic Scale	Kubany, Leisen, Kaplan, & Kelly, (2000)
PSS-SR	PTSD Symptom Scale-Self-Report	Foa at al., (1993)
SCS	Self-Compassion Scale	Neff, (2003b)
SCS-SF	Self-Compassion Scale – Short Form	Raes, Pommier, Neff & Van Gucht, (2011)
SEI	Shame Experiences Interview	Matos & Pinto-Gouveia, (2014)
SF12-MCS	The Rand Quality of Life Scale-Mental Component Summary	Ware et al., (1996)
SHS	Subjective Happiness Scale	Lyubomirsky & Lepper, (1999)
TLEQ	Traumatic Life Events Questionnaire	Kubany et al. (2000)
WBS	Short Warwick-Edinburgh Mental Well-being Scale	Stewart-Brown et al., (2009) Tennant et al., (2007)
WHODAS	The World Health Organization Disability Assessment Schedule 2.0	Üstün, et al. (2010)
YAAPST	Young Adults Alcohol Problems Screening Test	Hurlbut & Sher (1992)
YSR	Youth Self-Report	Achenbach & Rescorla, (2001)

PART ONE: Systematic Literature Review

Does Self-Compassion Mitigate the Negative Effects of Psychological Trauma?

ABSTRACT

Aims

This systematic literature review aimed to investigate the protective effects of self-compassion against the negative psychological consequences of traumatic events occurring across the lifespan.

Method

Relevant research databases (PsychINFO, Embase, Medline, Web of Science and Science Direct) were searched for peer-reviewed studies published up to June 2016. The reference lists of significant papers were also searched for relevant papers.

Results

Eighteen papers were reviewed. Overall, the review found that amongst trauma exposed individuals, greater self-compassion was predictive of reduced PTSD symptoms, depression, anxiety, alcohol/substance misuse, eating disorder symptoms, suicide attempts and emotional dysregulation.

Conclusions

Although the current literature highlights the association between self-compassion and post-trauma psychopathology, the strength of the association varied across clinical and non-clinical populations. In addition the literature suggested that the association may be affected by other factors (e.g. psychological inflexibility, perceived social support, severity of trauma). More research is required to assess changes in these associations over time and across different clinical populations. Further research would aid further development of psychological interventions which aim to reduce trauma-related distress using compassion focussed therapies.

INTRODUCTION

Conceptualisations of Self-Compassion

The construct of compassion has been a recent but quickly growing target for research in Western psychology (Barnard & Curry, 2011). The historical roots of compassion can be traced from world religions such as Buddhism and Christianity (Barnard & Curry 2011; Batson, Floyd, Meyer & Winner, 1999). Buddhism asserts that compassion is characterised by being moved by distress in both oneself and others as well as having a deep willingness to alleviate it (Neff, 2003a; Neff, 2003b). Christianity also emphasises the importance of harmony between compassion for others and the self, as believers are taught to "love your neighbour as yourself" (Batson, et al, 1999).

Western psychologists have tried to conceptualise compassion and self-compassion to measure it and empirically study its correlates (Barnard & Curry, 2011). Goetz, Keltner and Simon-Thomas (2010) define compassion as "a distinct affective experience whose primary function is to facilitate cooperation and protection of the weak and those who suffer" (p.351). Their definition is said to relate to states such as pity and sympathy which motivate a desire to help (Macbeth & Gumley, 2012). Other psychological definitions focus on the evolutionary advantage of compassion. For example, Gilbert (2010) defined compassionate attributes such as empathy, non-judgement and tolerance of distress as forming part of an evolved motivational system. This motivational system enhances chances of survival through the formation of strong protective attachment bonds resulting from caring behaviour (Bowlby, 1973; Gilbert, 2005). Therefore, compassion generates feelings of warmth and safeness that are experienced through attunement to the feelings of the self and others (Gilbert, 2010).

Barnard & Curry (2011) highlight the importance of distinguishing self-compassion from other self-constructs that are commonly linked with it. For example, constructs such as self-esteem are associated with self-liking that is strengthened by goal attainment and the sense of being a competent individual (Deci & Ryan, 1995). The compassionate stance differs in that it responds to personal limitations and failures with acceptance, warmth and kindness, whilst self-esteem can be threatened by failure (Kernis, 2003). Another construct linked to self-compassion is self-pity (Gilbert & Irons, 2005). However, unlike self-compassion, self-pity results in a loss rather than an enhancement of a sense of common humanity. The isolation arising from self-pity is due to over-identifying with difficult experiences (Barnard & Curry, 2011). Self-pity may share a similar quality to self-criticism and shame in engendering feelings of isolation that are perpetuated by mental and behavioural disengagement from difficulties (e.g. Dunkley, Zuroff & Blankstein, 2003; Macdonald & Morley, 2001; Zuroff, Moskowitz, Cote, 1999). Self-compassion, on the other hand, leads to acknowledging and approaching difficulties in order to help oneself (Germer & Neff, 2013).

In light of the conceptual distinctions outlined, it is essential to highlight Neff's (2003a) definition of self-compassion which is now widely used to describe the construct of self-compassion. Three interrelated features of self-compassion are said to be present during times of suffering and failure. These are (a) showing kindness and acceptance towards the self rather than exhibiting self-criticism, (b) seeing personal limitations as part of humanity rather than seeing one's difficulties as a reason to withdraw or isolate oneself, and (c) being mindfully aware of unwanted thoughts and feelings without over-identifying with or avoiding them.

The impact of low self-compassion on psychological wellbeing and mental health problems

There is a large body of evidence demonstrating the link between self-compassion and markers of psychological wellbeing. For example, in a sample of undergraduates, Neff, Rude and Kirkpatrick (2007b) found that self-compassion was positively correlated with positive affect, personal initiative, wisdom, curiosity, extroversion, conscientiousness and agreeableness. Neff, Kirkpatrick and Rude (2007a) also found greater social connectedness in those whose self-compassion increased over time.

Recent research has increasingly recognised a robust link between self-compassion and the severity of mental health difficulties (Macbeth & Gumley, 2012). Van Dam, Sheppard, Forsyth, Earleywine (2011) investigated the ability of self-compassion to predict worry, anxiety and depression. Ninety percent of their participants had previously sought mental health services and 82% had a psychiatric diagnosis. Van Dam et al. (2011) found that lower self-compassion strongly predicted symptom severity and reduced quality of life. This observed effect was over and above variance predicted by dispositional mindfulness, which is a tendency to pay attention to present 'here and now' experiences from a non-judgemental and accepting stance.

Research has also demonstrated the negative effects of low self-compassion in the symptom severity and recovery in Eating Disorders (ED). Inpatients with ED who have lower self-compassion and a greater fear of self-compassion have been found to experience higher shame, more ED pathology and poorer treatment outcomes (Kelly, Carter, Zuroff and Borairi, 2013). In a later study by Kelly, Carter and Borairi (2014), decreases in shame and increases in self-compassion were

associated with faster improvement in ED symptomatology.

Compassion research in the context of psychosis has highlighted the negative impact of low self-compassion on wellbeing and recovery. Using a semi-structured interview, Gumley and Macbeth (2014) measured "narrative compassion" in 29 individuals with psychosis. The interview aimed to access compassion and recovery-related cognitions, behaviours and emotions. They found that lower compassion was associated with more negative symptoms, anger, impulsivity and cognitive disorganisation. Similar to research in ED, shame has been found to be a significant barrier to experiencing stable improvement in distressing psychotic symptoms. In an earlier study by Gumley (2007), individuals diagnosed with psychosis who relapsed had higher levels of shame compared to those who had not - relapsed. It is believed that shame is accompanied by self-attacking (Gumley and Macbeth, 2014), which is at odds with a more psychologically adaptive self-compassionate stance (Gilbert, 2010).

The negative consequences of psychological trauma

Traumatic events and extreme stressors are defined by their ability to induce fear, horror and helplessness in response to threat of harm or death (Yehuda, 2002; American Psychological Association, APA, 1994). Exposure to such events increases the likelihood of developing a range of psychological difficulties including Post-Traumatic Stress Disorder (PTSD; Kessler, Sonnega, Bromet, Hughes & Nelson, 1995). Individuals diagnosed with PTSD demonstrate three distinct types of symptoms including re-experiencing the event, hyperarousal symptoms and avoidance of reminders of the trauma (APA, 1994). Epidemiological studies have indicated increased rates of PTSD symptoms, sexual dysfunction, mood disorders, substance abuse and somatic difficulties in individuals with more adverse

experiences (Anda et al., 2006). In addition, individuals with PTSD have been found to show increased anger, aggression and suicidal ideation (Jakupcak, et al., 2009; Yehuda 2002).

Research has also found that individuals diagnosed with PTSD often perceive themselves to be under current threat externally (e.g. fearing being attacked or harmed again) as well as internally, via an altered view of oneself that can result in shame (Elhers & Clarke 2000; Harman & Lee, 2010). Seeing the self as shameful and others as shaming leads to feelings of inadequacy and worthlessness (Leskela, Dieperink & Thuras, 2002). These feelings not only lead to self-criticism, but also a desire to avoid painful emotional experiences and isolating oneself from others (Ehlers & Clarke, 2000; Leskela et al., 2002), which is at odds with the adaptive nature of kind self-acceptance and a sense of common humanity during suffering (Neff, 2003a).

Self-compassion and psychological trauma: Rationale for the review

The research summarised suggests that self-compassion is adaptive in ordinary life situations, such as in maintaining healthy relationships (Neff & Beretvas, 2013) and protective in the face of emotional distress related to depression, anxiety, psychosis and ED (Van Dam et al., 2011; Kelly et al., 2013; Gumley & Macbeth, 2014). The findings summarised also suggest that high shame and self-criticism, alongside low self-compassion, may perpetuate mental distress. This finding is also evident among victims of traumatic events. Research by Harman and Lee (2010) indicated that high shame and self-criticism maintained PTSD symptoms. Their findings also suggested that it was important to consider the role of lower self-kindness and self-reassurance in PTSD. Although they did not measure self-

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compassion and therefore not included in this review, they suggested that low self-compassion leads to an inability to feel safe and soothed. Therefore, the resulting sense of ongoing threat and danger maintains psychological distress (Harman & Lee, 2010; Ehlers & Clarke, 2000).

Research has also shown that improving self-compassion reduces the negative effects of high shame and self-criticism which may perpetuate mental distress (Leaviss & Uttley, 2015). Though shame and self-criticism are common in PTSD (Leskela et al., 2002; Harman and Lee 2010), research designed to improve interventions for self-compassion in trauma-exposed individuals is still very much in its infancy (see Lawrence & Lee 2014).

This literature review aims to explore the link between self-compassion and psychological morbidity amongst trauma exposed individuals. A detailed understanding of the link between self-compassion and the negative consequences of psychological trauma could provide guidance for developing and delivering therapeutic interventions for trauma-exposed individuals.

METHOD

Identification of studies

Relevant journal articles for this review were identified using a systematic database search and by searching the reference lists of relevant papers. The databases searched were, PsychINFO, Embase, Medline, Web of Science and Science Direct. Results were limited to journal articles that were peer reviewed and were published any time before June 2016.

Search Strategy

The terms *"compassion*", "psychological trauma" "trauma*", "PTSD",*

or *"negative life event*"* yielded a large number of articles that were considered to be not relevant based on their titles. For example, many articles addressed 'compassion fatigue' in healthcare workers and research relating to various aspects of psychological trauma without specifically investigating self-compassion.

Based on the literature mentioned and the initial wider search, the final search included the following key words related to the relationship between self-compassion and the effects of psychological trauma:

(self-compassion*, *self-kindness, self-forgiveness*)

AND

(Consequence* OR effect* OR resilien* OR protect* OR risk)

AND

(PTSD OR trauma* OR post-trauma* OR Stress* event* OR negative life events OR abus* OR maltreat*).

Inclusion and exclusion criteria

In order to facilitate the identification of relevant articles, studies were included if they:

(i) Included a psychometrically evaluated measure of self-compassion

(ii) Reported on the psychological morbidity following traumatic experiences (which includes mood disorders, substance misuse, antisocial behaviour or PTSD symptoms).

(iii) Examined the relationship between criterion (i) and (ii).

(iv) Included a measure of traumatic experiences *or* a measure of psychological trauma symptoms.

(v) Were written in English.

Likewise, studies were excluded if they:

(i). Include individuals diagnosed with a moderate to severe learning disability or individuals who are actively experiencing psychotic symptoms (e.g. hallucinations or delusions). This is because the relevant psychometric measures related to this review have not been adapted and validated among populations that might lack insight or have difficulties with verbal capacity and comprehension.

(ii) Were not published in a peer reviewed journal. This includes conference abstracts and poster presentations.

The search yielded a total of 1507 papers. When duplicates were removed, 1226 papers remained. The titles of papers were reviewed leaving 38 abstracts for screening. Of the 38 abstracts, 16 were excluded because they did not meet the criteria set out above. A total of 22 studies were read through in full and a final four were excluded. This was because they did not make links between self-compassion and consequences of past traumatic events. A total of 18 papers remained. When the reference lists of the 38 abstracts were searched, no further relevant papers were found. See figure one for the details of the search process.
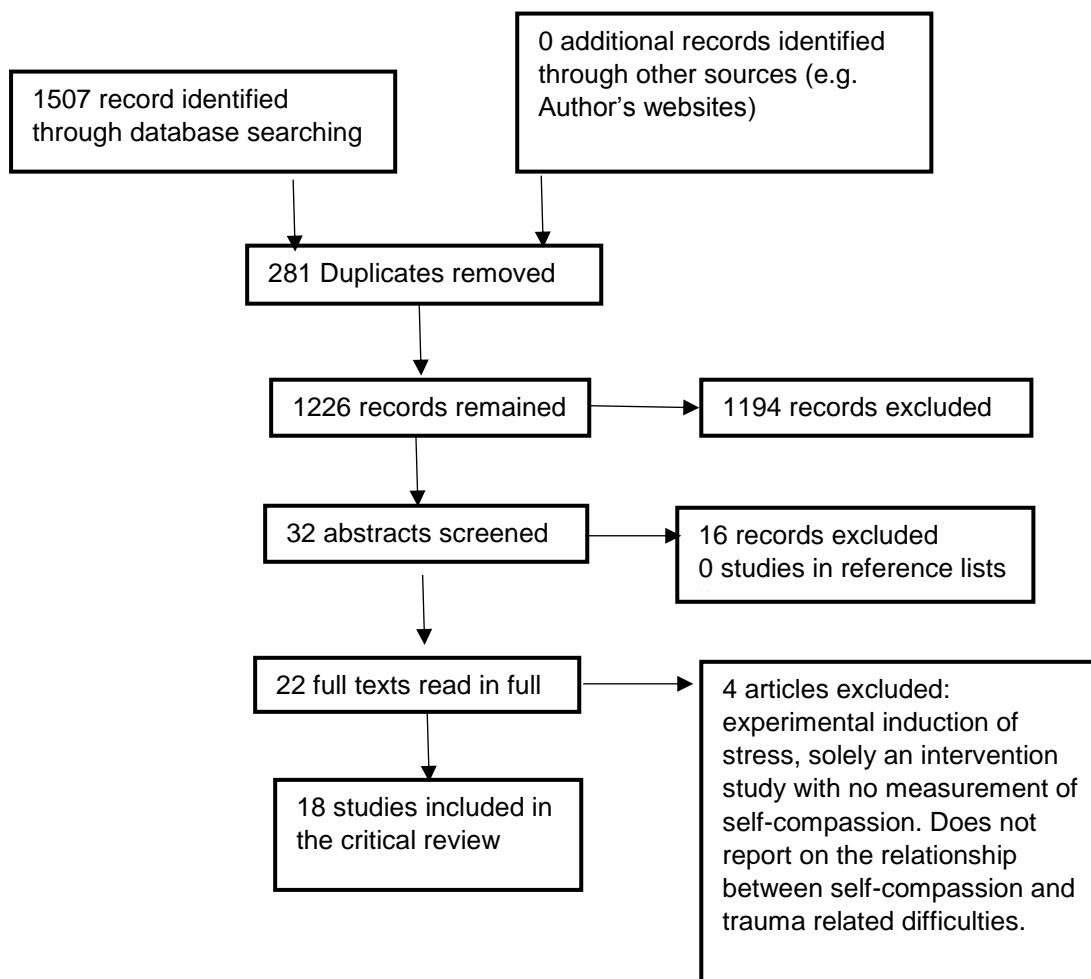
Figure 1: Flow diagram of articles through the process of inclusion in the review.

RESULTS

Overview

Table 1 provides a summary of the key features of the 18 studies, including

the main significant findings. The studies were also assessed for quality using the

Kmet, Lee and Cook (2004) criteria for quantitative studies to ensure a consistent

and thorough consideration of the relevance and impact of the studies. The checklist

enabled the reviewer to assess the quality of each study by taking into account

strengths and limitations in study design, participant characteristics, variable

measurement, controlling for confounds and conclusions drawn. Specific aspects of

each study, such as the design ("design evident and appropriate), and measurement

("Outcome defined and robust to misclassification bias") were scored by selecting

either a "yes", (two points) "partial" (one point) or a "no" (zero points). A percentage

score was calculated for each study. Four of the studies were re-rated by another

reviewer and there was 94.08% agreement. See Appendix A for the full list of

criteria assessed with ratings for each study.

Table 1. Summary of study methods and results relevant to the literature review question.

Author, year (ref)	Sample	Study design and Analysis method	Self-compassion measure	Trauma-related variables measured	Main Findings
1. Dahm et al., (2015)	U.S. N=115, 83.5% male, means age 37.41 years, Iraq/Afghanistan war veterans recruited via enrolment sites, direct mailings and clinical staff.	Cross-sectional study. Hierarchical regression analyses.	26-item SCS	PTSD symptoms (CAPS) Mindfulness (MAAS) World Health Organisation Disability assessment (WHODAS)	Lower self-compassion and mindfulness were both uniquely associated with more severe PTSD symptoms and greater disability.
2. Ferreira et al., (2014)	Portugal. N=34, 100% female (inferred from discussion), mean age 24.56 years, diagnosed with eating disorders (ED) and recruited from an ED outpatient service.	Cross-sectional study. Hierarchical multiple regression analyses.		Eating Disorder examination (EDE) Shame experiences interview (SEI) PTSD symptoms (impact of events scale; IES-R) Centrality of event scale (CES)	Higher levels of self-compassion could only ameliorate the effects of shame memories on ED pathology if the traumatic and centrality features of the memories were at low to medium levels.
3. Hiraoka et al., (2015)	U.S. N=115, 83.5% male, mean age 37.41 years, war veterans recruited from Texas Veterans' Health Care System.	Prospective cohort study. Hierarchical regression analyses (both at baseline and at 12-months follow up)	26-item SCS	PTSD symptoms (CAPS) Combat Exposure (FCES)	Lower self-compassion predicted more severe PTSD symptoms at baseline and after 12 months, even after controlling for combat exposure.

Study	Sample	Design	SCS version	Measures	Findings
4. Hoffart et al., (2015)	Norway. N=65, 58.5% female, mean age 45.2 years, recruited from referrals to a PTSD treatment programme at a National clinic.	Cohort treatment study. Regression analysis	26-item SCS translated to Norwegian	PTSD symptoms (PSS-SR)	Patients presenting with higher self-compassion than expected in a given week showed lower self-reported PTSD symptoms than expected
5. Jativa & Cerezo (2014)	Spain. N=109, 71.6% male, mean age 16.74 years, recruited from a professional qualification program designed for adolescents with poor school performance.	Cross-sectional study. Simple and multiple regression analyses	26-item SCS	Exposure to traumatic experiences (JVQ) Psychological Maladjustment (YSR)	Self-compassion was negatively correlated with psychological maladjustment. Victimisation showed reduced negative outcomes for adolescents with higher self-compassion.
6. Maheux & Price (2015)	U.S. Sample 1: N=74, 71.6% female, mean age 23.36 years. Recruited from the community and university. Sample 2: N=152, 50.7% male, mean age 35.02 years. Recruited via online crowdsourcing platform.	Cross-sectional study. Hierarchical regressions.	12-item SCS-SF	Life events checklist (LEC-5) PTSD Checklist for DSM-IV (PCL-C) PTSD Checklist for DSM-5 (PCL-5)	Across the two independently collected samples, self-compassion was significantly negatively associated with more PTSD symptom clusters on the DSM-5 compared with the DSM-IV.

7. Maheux & Price (2016)	U.S. N=599, 50.3% female, mean age 34.08 years. Recruited from an online crowding platform (Amazon's Mechanical Turk)	Cross-sectional study. Regression analyses	12-item SCS-SF	Exposure to traumatic experiences (LEC-5) PTSD symptoms (PCL-5) Depression (PHQ-8) Anxiety (GAD-7) Perceived social support (MSPSS)	Self-compassion was negatively related to PSTD, depression and anxiety symptoms. Self-compassion mediated the relationship between social support and post-trauma psychopathology.
8. Miron et al., (2015)	U.S. N=201, 64.9% female, mean age 20.3 years, recruited from undergraduates enrolled in Psychology.	Cross-sectional study. Hierarchical multiple regression analysis.	15-item FCS-SC	Exposure to traumatic experiences (TLEQ) PTSD symptoms (PSDS) Mood (PANAS) Psychological inflexibility (AAQ-II)	Fear of self-compassion was positively correlated with traumatic stress symptoms among participants with higher psychological inflexibility.
9. Miron et al (2016)	U.S. N=377, 63.9% female, mean age 19.1 years, recruited from undergraduates enrolled in Psychology	Cross-sectional study. Path analysis.	15-item FCS-SC; 26-item SCS	Exposure to traumatic experiences (TLEQ) Depression and Anxiety (DASS)-21 PTSD symptoms (PSDS)	There is an indirect relationship between childhood sexual abuse and psychological morbidity (PTSD symptoms and depression) via fear of self-compassion. This path was not observed with the measure of self-compassion. However, self-compassion was still negatively correlated with depression and PTSD symptoms.

10. Miron et al., (2014)	U.S. N=667, 100% females, mean age 18.71 years, recruited from undergraduates enrolled in Psychology.	Cross-sectional study. Path analysis.	26-item SCS	Exposure to childhood and adolescent sexual abuse (TLEQ) Exposure to childhood emotional abuse (7 items of the FEQ) Exposure to childhood physical abuse (6 items from the CHQ) Alcohol problems (YAAPST)	Lower self-compassion predicted alcohol problems. Childhood emotional abuse was related to alcohol problems among females with lower self-compassion.
11. Scoglio et al., (2015)	U.S. N=168, 100% female, mean age 41.18 years, recruited from large public hospitals in urban settings and were survivors of interpersonal violence with a primary diagnosis of PTSD.	Cross-sectional study. Bootstrap mediation analyses.	12-item SCS-SF	PTSD symptoms (CAPS) Difficulties in Emotional Regulation (DERS) Resilience (CD-RISC)	Low self-compassion was associated with more severe PTSD symptoms, greater emotional dysregulation and poorer resilience. There was an indirect relationship between PTSD symptom severity and lower self-compassion through greater emotional dysregulation.
12. Seligowski et al., (2014)	U.S. N=453, 65.7% females, mean age 19.75 years, recruited from undergraduates enrolled in Psychology	Cross-sectional. Structural Equation Modelling.	26-item SCS	Exposure to traumatic life events (TLEQ) PTSD symptoms (PSDS) Psychological Inflexibility (AAQ-II) Health quality of life (SF12-MCS) Happiness (SHS) Overall Wellbeing	The positive and negative factors of self-compassion strongly predicted psychological health, even after accounting for PTSD symptoms and psychological inflexibility.

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13. Tanaka et al., (2011)	Canada. N=117, 45.3% males, mean age, 18.1 years, recruited adolescents receiving child protection services.	Cross-sectional data. Hierarchical stepwise regression analyses	26-item SCS	Exposure to traumatic events (CTQ) Depression CES-D) Psychological Distress (GHQ) Alcohol problems (AUDIT) Substance Abuse (CRAFFT) Suicide Attempt question (OSDUHS)	Lower self-compassion was associated with trauma-related difficulties (alcohol problems, anxiety, attempting suicide), after controlling for emotional neglect, physical abuse and emotional abuse.
14. Thompson & Waltz (2008)	U.S. N=210, 62.4% females, median and modal age, 19 years, recruited from undergraduates enrolled in Psychology	Cross sectional study. Spearman's correlations.	26-item SCS	PTSD symptoms (PDS)	Self-compassion was negatively correlated with PTSD avoidance symptoms.
15. Valdez & Lilly, (2015)	U.S. N=63, 100% female, mean age 31.48 years, 7 recruited from undergraduates in Psychology and 56 from the community. All were victims of intentionally caused trauma.	Experimental study using Pearson's correlations.	26-item SCS	Exposure to traumatic events (TLEQ) PTSD symptoms (PCL-C)	Self-compassion subscales, self-kindness and mindfulness were negatively associated with post-traumatic stress symptoms, including emotional numbing and hyperarousal.

16. Vettese et al., (2011)	Canada. N=81, 65.4% male, mean age 19.49 years, recruited at intake to a hospital based substance treatment programme.	Cross sectional study. Stepwise multiple regression.	26-item SCS	Exposure to traumatic events (CTQ) Emotional dysregulation (DERS) Psychological distress (BSI) Substance misuse (BASIS-SMS)	Low self-compassion significantly predicts emotional regulation difficulties over and above childhood maltreatment, severity of substance misuse and psychological distress.
17. Westphal et al., (2016)	U.S. N=326, 59% female, mean age 34.05 years, recruited from patients in a private mental health clinic in an urban setting.	Cross-sectional study. Path analysis.	12-item SCS-SF	Perceived parental abuse and indifference (MOPS) Emotional invalidation (LESS) Mental health outcomes (including PTSD; MCMI-III)	Self-compassion and emotional invalidation partially mediate the relationship between negative parenting and mental health outcomes, including PTSD symptoms.
18. Zeller et al., (2014)	Israel. N=64, 26.6% female, mean age 17.5 years. Recruited from students living in an educational residential institution immediately following the Carmel Fire Disaster.	Longitudinal Study. Multilevel modelling of mediation.	26-item SCS translated to Hebrew	Impact of traumatic event (CTQ) Psychological distress and wellbeing (IDAS) Dispositional mindfulness (MAAS)	Higher levels of self-compassion predicted reduced elevations in trauma related psychological distress over time. This effect was above and beyond contributions from dispositional mindfulness.

Cross-sectional data

The link between self-compassion and PTSD symptoms

Traumatic experiences and subsequent symptoms of post-traumatic stress have been found to be associated with self-criticism, ruminative thinking and avoidance of internal experiences (Cox, MacPherson, Enns & McWilliams, 2004; Steil & Ehlers, 2000). These coping strategies have been found to oppose the goals of self-compassion (Barnard & Curry, 2011). Thompson and Waltz (2008) set out to examine the correlational relationship between self-compassion and PTSD symptoms. One hundred out of 210 participants reported having experienced at least one traumatic event, during which they feared injury or death and felt terrified and/or helpless. Within the exposed group (n=100), 22 met the criteria for PTSD according to the self-report symptom measure. Only the avoidance symptom yielded a significant negative correlation with the SCS total score (r=-.24, p<0.05, small effect size). None of the six SCS subscale scores were significantly correlated with avoidance symptom severity. The findings suggest that lower overall self-compassion may be associated with a need to avoid painful thoughts, emotions and reminders of traumatic events.

The study by Thompson and Waltz (2008) achieved a quality rating of 16/20. The study used only two measures, which means it may have overlooked an array of other mediating variables that could have impacted on the relationships explored. In addition, only 10% of their undergraduate sample met the criteria for a diagnosis of PTSD. This may have accounted for the lack of significant findings with other symptoms of PTSD. Therefore, the findings may not be generalisable to a clinical population.

A later study by Seligowski, Miron & Orcutt (2014) set out to examine the relationship between self-compassion and PTSD symptoms in a larger sample of undergraduates (n=453). Seligowski et al. (2014) expanded on the study by Thompson et al. (2008) as they predicted that self-compassion would be positively associated with markers of psychological health. Furthermore, the study also took account of psychological inflexibility which is associated with avoidance of internal experiences, self-judgement and overidentification with psychological reactions (Bond et al., 2011).

Using a structural equation model, Seligowski et al., (2014) found that using a two-factor model for the self-compassion scale (SCS, Neff, 2003b) indicated an improved fit for the data compared to a single factor model. The SCS subscales were divided into the positive self-compassion components (PSC; consisting of self-kindness, common humanity, and mindfulness) and negative self-compassion components (NSC; consisting of self-judgement, isolation, and overidentification). The PSC and NSC factors significantly accounted for the variance in overall psychological wellbeing after controlling for PTSD symptoms and psychological inflexibility. However, both self-compassion factors failed to predict PTSD symptoms after controlling for psychological inflexibility. The results suggest that lower self-compassion predicts PTSD symptoms in the presence of greater psychological inflexibility.

The study by Seligowski et al. (2014) study achieved a quality rating of 13/20. This study had several limitations. The results relating to NSC factor were not reported clearly within the results section, but were stated in the abstract. The relevant coefficients and alphas relating to the significant relationships reported above were not reported in the main results section. The significant findings relating

to overall wellbeing have to be carefully interpreted because of the small number of questionnaire items and problems with reliability. The mental health component of the SF-12 quality of life measure, consisting of 7 items, was found to have low internal consistency (α=.55). The happiness scale (SHS; Subjective Happiness Scale; Lyubomirsky & Lepper, 1999) had good internal consistency (α=0.85), but only consisted of 4-items. In addition, the measure of mental wellbeing (WBS; Short Warwick-Edinburgh Mental Well-being Scale, Stewart-Brown et al., (2009)) also consisted of only 7-items.

Gilbert et al., (2011) highlighted that people who fear self-compassion may be threatened by and avoidant of taking a self-compassionate stance. Based on this, a later study by Miron, Sherrill and Orcutt (2015) examined the role of fear of self-compassion in its ability to predict PTSD symptom severity in 201 undergraduates. Similar to Seligowski et al., (2014), Miron et al., (2015) were also interested in the intervening role of psychological inflexibility. Descriptive statistics and correlations demonstrated greater inflexibility in women and showed that negative affect was associated with greater fear of self-compassion. As a result, participant sex and negative affect were included as covariates in the analyses.

The results of regression analyses showed that there was a significant positive relationship between fear of self-compassion and reported PTSD symptoms for people with high psychological inflexibility (B=3.81, p<0.01). This pattern was not observed for people with low psychological inflexibility (B=.43, p=.77). The interaction between psychological inflexibility and fear of self-compassion was significant in predicting PTSD symptoms (B=1.22, p<.05; f^2 = .02, small effect size). The authors suggest that fear of self-compassion only increases distress if an individual has a tendency to try and control difficult internal experiences

(psychological inflexibility).

This study achieved a quality rating of 15/20. It was limited by its use of a cross-sectional design and reliance on data from individuals in the non-clinical population. In addition, the findings demonstrating the interaction between fear of self-compassion and psychological inflexibility in predicting PTSD symptoms must be interpreted with caution due to the very small effect size observed.

The negative impact of fear of self-compassion was examined again by Miron, Seligowski, Boykin, Orcutt (2016). The authors conducted a study to examine the contributions of fear of self-compassion (as measured by the FSC-SC) *and* self-compassion (as measured by the SCS) in the link between childhood abuse and psychological morbidity (PTSD symptoms and depression). Miron et al., (2016) recruited 377 undergraduate students from a range of ethnic backgrounds to participate in the study. Using a saturated path model, there was a significant indirect relationship between childhood sexual abuse (CSA) and measures of psychological morbidity (PTSD symptoms and depression) via fear of self-compassion. Specifically, the significant findings identified a path in which higher CSA was associated with greater fears of self-compassion (B=.14, p<.05). Following on from this, higher fear of self-compassion was associated with increased depression (B=.34, p<.001) and PTSD symptoms (B=.33, p<.001). These indirect pathways were not observed with the measure of self-compassion. However, bivariate correlations demonstrated that self-compassion was negatively associated with PTSD symptoms (r=.-.26, p<.001; small effect size) and depression (r=-.53, p<.001; large effect size).

The study by Miron et al., (2016) achieved a quality rating of 17/20. However as the study participants were drawn from a non-clinical undergraduate sample they may not be representative of clinical populations who would likely have

more experiences of childhood abuse and more severe and enduring psychological difficulties. The use of self-report measures is also likely to result in inflated responses. Despite the study's limitations, it demonstrates how specific early traumas such as childhood sexual abuse may contribute to self-compassion being feared and strongly resisted, which perpetuates symptoms of depression and PTSD.

Unlike the previous studies discussed, Dahm, Meyer, Neff, Kimbrel, Gulliver, Morissette (2015) recruited a clinical population which consisted of 115 war veterans diagnosed with PTSD. Dahm et al., (2015) examined the role of self-compassion and mindfulness in contributing to the severity of PTSD symptoms and functional disability in participants. Using hierarchical regression analyses, Dahm et al., (2015) found that self-compassion predicted PTSD symptom severity after controlling for mindfulness (B= -.48, p<.001; f^2 = .28; medium effect size). Self-compassion also predicted functional disability after controlling for PTSD symptoms and mindfulness (B=-.27, p<.01; f^2 = .13; small effect size). In addition to self-compassion, mindfulness also uniquely predicted PTSD symptom severity (B=-.30, p<.01) and disability (B=.28, p<.01). The combined association of mindfulness and self-compassion showed a large effect size in predicting PTSD symptoms (f^2 = 1.0). The combined association of mindfulness and self-compassion showed a large effect size (f^2 = .41) in predicting functional disability after controlling for PTSD symptoms. The findings suggest that higher levels of both mindfulness and self-compassion mitigate symptoms of PTSD and overall functional disability in war veterans.

The study by Dahm et al. (2015) study achieved a quality rating of 18/20. The sample size is deemed to be sufficient based on the effect sizes reported above. In addition to being cross-sectional in nature, the study was limited in its

generalisability to other populations with post-traumatic psychopathology outside a war context (e.g domestic violence, road traffic accidents, childhood abuse).

Scoglio, Rudat, Garvert, Jarmolowski, Jackson & Herman (2015) employed the use of a different group of participants within the clinical population. Their participants consisted of 168 female survivors of interpersonal violence who were recruited from public hospitals in urban settings. Within the sample, 94.6% had experienced trauma in childhood and 85.1% had experienced trauma in adulthood. Their study investigated the link between self-compassion, PTSD symptoms, emotional dysregulation and resilience.

Using correlational analysis, self-compassion was negatively related to PTSD symptoms (r=-.28, p<.01, small effect size), emotional dysregulation (r=-.70, p<.01, large effect size) and positively related to resilience (r=.53, p<.01, large effect size). Using bootstrapping mediational analysis, the authors investigated the indirect relationship between PTSD symptom severity and self-compassion, via emotional regulation. This relationship was significant after 10,000 bootstrap draws (standardized 95% CI = [−.41, −.22], p< .001). The fit of the model was determined to be adequate ($X^2(6) = 6.27$, p = .393, CFI = .998, root mean square error of approximation = .017). The results suggest that more severe PTSD symptoms were associated with greater emotional dysregulation which is linked to lower self-compassion.

The study by Scoglio et al. (2015) study achieved a quality rating of 18/20. The strong effect sizes suggest that the sample size was adequate in this study. Although the study used a clinical population with a range of interpersonal traumas, the study did not control for the impact of number and severity of traumatic experiences on the variables. The correlational design limits the study's ability to

demonstrate causal relationships. Although some demographic variables were accounted for in the analyses (age, education, earnings), the findings may still not be generalisable as the sample only consisted of female participants. In addition, generalisability was also limited by the exclusion of participants with ongoing risks (e.g. substance misuse).

Thus far some studies have demonstrated the contribution that self-compassion makes in relation to PTSD symptoms alongside additional constructs such as psychological inflexibility, mindfulness, emotional dysregulation. Westphal, Leahy, Pala and Wupperman (2016) investigated the contribution of emotional invalidation and self-compassion in predicting the relationship between exposure to adverse parenting in childhood and psychopathology in adulthood (including PTSD symptoms). Emotional invalidation was measured by the invalidation subscale of the Leahy Emotional Schema Scale (LESS; Leahy, 2002) which relates to the tendency to perceive others as dismissive of one's emotions. The study included 326 psychiatric outpatients.

Zero order correlational analysis revealed a significant negative relationship between self-compassion and PTSD symptoms (r=-.50, p<.001, Large effect size). A path analysis revealed that self-compassion and emotional invalidation significantly predicted the relationship between indifferent parenting and PTSD (B=0.12, p<.001), Borderline Personality Disorder (BPD) (B=0.14, p<.001) and Major Depressive Disorder (MDD) (B=0.14, p<.001). The authors reported that effect size was of moderate magnitude, but the exact coefficients were not reported. The findings suggest that exposure to indifferent parenting is associated with lower self-compassion and higher emotional invalidation, which is associated with greater symptoms of MDD, BPD and PTSD. In contrast, although abusive parenting was

positively associated with PTSD, MDD, and BPD, abusive parenting was not significantly associated with self-compassion and emotional invalidation. The authors suggested that abuse may reflect a parent's awareness (rather than invalidation) of a child's emotions and be a punitive reaction to them.

The study by Westphal et al. (2016) study achieved a quality rating of 14/20. The results yielded using the invalidation subscale of the LESS should be interpreted with caution as the measure only consisted of 2 items with a Cronbach's alpha of .68. Another limitation of this study was that it relied on retrospective self-reporting of parental experiences, without verification from independent reports.

Thus far, the studies reviewed have relied upon one particular measure of PTSD symptoms and its relation to self-compassion. Maheux and Price (2015) investigated the relationship between self-compassion and PTSD symptoms using questionnaires based upon both DSM-IV (APA, 1994) and DSM-5 (APA, 2013) diagnostic criteria (See Table 1). They employed two separate samples: Sample one consisted of 74 participants recruited from both the community and university who completed measures of PTSD symptoms assessed using DSM-IV criterion; Sample two consisted of 152 participants recruited via a crowdsourcing platform. They completed measures of PTSD symptoms assessed according to DSM-5 criterion.

In sample one, a hierarchical regression revealed that self-compassion was significantly negatively correlated with avoidance (b= -0.16, p=.022) but not with hyperarousal or re-experiencing symptoms. In sample two, a hierarchical regression, controlling for gender and age, demonstrated that self-compassion was significantly negatively correlated with re-experiencing (b=0.14, p<.001), avoidance (b=-0.08, p<.001), hyperarousal (b=-0.21, p<.001) and dysphoria (b=-0.23, p<.001).

The study by Maheux and Price (2015) achieved a quality rating of 18/20. The discrepant findings between the relationship between self-compassion and PTSD symptoms across DSM-IV and DSM-5 criterion can be explained by a variety of factors. This presents challenges for the interpretation of the results. One explanation might be related to the individual differences in the samples used. Sample one consisted of a larger volume of undergraduate participants. On the other hand, sample two consisted of a greater number of participants from a more diverse population who likely reflected a higher proportion of trauma-exposed individuals. The discrepant findings might also be reflective of the changes to the diagnostic criterion for PTSD, with the DSM-IV measure focussing exclusively on anxiety and the DSM-5 measure focussing on both anxiety and dysphoric symptoms.

A later study by Maheux and Price (2016) employed the use of a PTSD measure based on the DSM-5 (PLC-5; PTSD Checklist for DSM-5, Weathers, Litz, Kearne, Palmieri, Marx & Schnurr, 2013).They expanded on their previous study as they investigated the role of the internal resource of self-compassion in mediating the relationship between social support and markers of psychopathology, including symptoms of PTSD. Maheux and Price (2016) recruited 599 participants through an online crowd sourcing platform. This recruitment strategy had the advantage of targeting a large number of diverse individuals with significant levels of psychopathology. All included participants were required to have experienced at least one traumatic event.

Using a regression analysis, the results showed that lower self-compassion was significantly related to higher levels of avoidance symptoms (b= -0.06, p<.001). Maheux and Price (2016) also found that self-compassion was negatively associated with re-experiencing symptoms (b= -0.13, p<.001), numbing (b= -0.27, p<.001) and

hyperarousal (b= -0.21, p<.001) after controlling for gender, age, income and amount of trauma exposure.

In addition, Maheux and Price (2016) found that self-compassion accounted for a significant portion of the relationship between social support and all the DSM-5 PTSD symptom clusters captured by the PTSD Checklist-5 for DSM 5 (PCL-5; Weathers, et al., 2013) . Finally, self-compassion was also negatively associated with depression (b= -0.33, p<.001) and anxiety (b= -0.29, p<.001). Maheux and Price (2016) interpreted their findings to reflect the interaction of internal and external sources of support that encourages resilience in the face of negative experiences.

The study by Maheux and Price (2016) study achieved a quality rating of 18/20. The study relied solely on self- report data which raised concerns about the quality and validity of the data. The authors attempted to improve validity by having multiple raters review the potentially traumatic events (PTEs) reported, including questions aimed at checking validity of responses and monitoring time spent completing each measure. Similar to some studies discussed in this section, Maheux and Price (2016) did not assess the impact of self-compassion and social support on a broader range of psychopathology related to exposure to PTEs (e.g. substance abuse, antisocial behaviour, sexual dysfunction, eating disorders).

The link between self-compassion and psychopathology in trauma exposed samples

The following studies differ somewhat from the ones previously discussed as they examine self-compassion in the context of other difficulties related to trauma exposure, without focusing on symptoms of PTSD.

Vettese, Dyer, Li and Wekerle (2011) explored whether self-compassion was a mitigating factor in the link between psychological trauma in childhood and

emotional regulation difficulties.

The participants consisted of 81 youths aged 16-24, seen at intake for a hospital-based substance misuse treatment. In this study, self-compassion was found to uniquely predict emotional dysregulation over and above childhood maltreatment history, psychological distress and severity of substance misuse (B=−.44, t=5.25, p<.001; $f^2 = 0.16$, medium effect size). Sobel's test showed that controlling for self-compassion significantly reduced the association between childhood maltreatment and difficulties with emotional regulation, suggesting that self-compassion is a significant mediator (z= 2.97, p<.01; Cohen's d=0.7, medium effect size) between childhood maltreatment and emotional regulation difficulties.

The study by Vettese et al. (2011) achieved a quality rating of 17/20. Though this study demonstrated acceptable effect sizes, it is important to highlight that it did not measure specific aspects of the nature of childhood maltreatment. Previous research has shown that the impact of childhood maltreatment varies according to relationship to the abuser, severity, duration and emotional responses during maltreatment as well as other people's responses to the maltreatment (Feiring, Taska & Lewis 2002; Kendall-Tackett, 2002). Measuring these factors could help to understand how they might impact on the mitigating effects of self-compassion. This study also used a specific group of youths seeking treatment for substance abuse, which might limit the generalisability of the findings.

Tanaka, Wekerle, Schmuck & Paglia-Boak (2011) examined self-compassion as a construct related to resilience in youths under the care of child protective services. Specifically, they were interested in two things: (1) whether the degree of early maltreatment predicted self-compassion scores, and (2) whether maltreatment and self-compassion predicted maltreatment related difficulties. One

hundred and seventeen youths aged 16-20 years were included in this study.

Using correlational analysis, their findings showed that higher levels of emotional abuse, physical abuse and emotional neglect were associated with lower self-compassion. The regression analyses found that self-compassion predicted the maltreatment-related impairment risk score (relating to anxiety/depression, psychological distress, substance misuse, suicidality) after controlling for emotional abuse, physical abuse and emotional neglect (B= -.36, p<.001, f^2 = 0.11, small effect size). The findings suggest that self-compassion may be protective against the risk of severe psychopathology and maladjustment arising from early experiences of maltreatment.

The study by Tanaka et al. (2011) achieved a quality rating of 16/20. The sample were drawn from a larger longitudinal study during the second year of the study. The study was therefore limited by data collection at one time point, which means developmental changes in mental health outcomes and self-compassion could not be captured.

Another cross-sectional study that recruited a sample of victimised youths was conducted by Jativa and Cerezo (2014), who investigated the role of self-compassion in protecting against psychological maladjustment. Participants consisted of 109 adolescents enrolled in an initial professional qualification programme due to poor school performance. This cross sectional study assessed participants' experiences of victimisation using the Juvenile Victimisation Questionnaire (JVQ; Finkelhor et al., 2005) which includes measures of victimisation in the family as well as peer and sibling victimisation, conventional offenses (e.g. assault), sexual victimisation perpetrated by both known and unknown individuals as well as internet victimization.

A regression analysis showed that youths with more victimisation experiences showed greater psychological maladjustment. In addition, there was a significant negative association between self-compassion and psychological maladjustment. Self-compassion was shown to mediate the relationship between victimisation and psychological maladjustment (B=.548, p<.01). The authors report that the effect size of the mediating effect of self-compassion was significant (*indirect effect* = 0.38; z=2.22, p=.02). The findings suggest that severity of victimisation has reduced negative psychological consequences in youths with higher levels of self-compassion.

The study by Jativa and Cerezo (2014) achieved a quality rating of 15/20. They excluded data from 43 youths who provided incomplete questionnaire measures, reducing the total of completers to 109. Despite the reduction in number of participants, the significance of the effect size suggests that a good sample size was retained. Nonetheless, the observed mediational role of self-compassion was only partial, which suggests that multiple unknown mitigating factors may be involved in the relationship. It is important to note that an accurate measurement of behavioural difficulties may have been limited by the self-report procedure used in this study, as youths may have under-reported problem behaviours.

The previous studies reviewed have shown the link between maltreatment, low self-compassion and broad measures of psychological maladjustment in at risk youths.   Miron, Orcutt, Hannan & Thompson (2014) specifically focussed on investigating the link between self-compassion, childhood trauma and problematic alcohol use in 667 females in college.

Miron et al. (2014) considered previous research that demonstrated evidence of increased alcohol abuse arising from sexual re-victimisation in adolescence (e.g.

Najdowski & Ulman, 2009). As a result of these findings, Miron et al. (2014) added adolescent sexual abuse (ASA) as a potential mediator between child abuse and alcohol problems in adulthood.

Self-compassion was not significantly related to physical and sexual abuse. Low self-compassion mediated the relationship between childhood emotional abuse and alcohol problems (B= .03, z= 2.18, p<.05). The authors suggest that childhood emotional abuse results in more negative self-dialogue and self-attacking which is more at odds with self-compassion compared with physical and sexual abuse. However this finding is contrary to research that has found a link between sexual and physical abuse and feelings of shame which are at odds with self-compassion (e.g. Andrews & Hunter, 1997; Kim, Tabot, Ciccheti, 2009).

The study by Miron et al. (2014) achieved a quality rating of 17/20. The current sample came from a large but relatively normative sample accessing university education. The findings might not be generalisable across individuals who have less opportunity, resilience and experience more persistent adversity. In addition, the authors only used females because sexual revictimisation has been shown to affect more females than males (Finkelhor, Hotaling, Lewis & Smith, 1990; Pereda, Guilera, Forns, & Gomez-Benito, 2009). However, it is widely known that sexual assault in males is poorly reported and that the negative consequences may be more severe compared with females (Davies, 2002).

Whilst other studies measured discrete traumatic events (e.g physical and emotional abuse), Ferreira, Matos, Duarte and Pinto-Gouveia, (2014) investigated the relationship between shame memories related to trauma, self-compassion, self-judgement and eating disorder pathology. Participants consisted of 34 patients with an eating disorder diagnosis. Ferreira et al., (2014) conducted multiple regression

analyses in order to clarify whether the positive (self-kindess, mindfulness, common humanity) or negative components (self-judgement, isolation, over-identification) of self-compassion best predicted severity of eating psychopathology. Only the positive component was found to a significant predictor (B=-.84, p<.001). Therefore only the positive component was used as a moderating variable in the relationship between shame memory variables and eating psychopathology.

The traumatic nature of shame memories (SEI; Shame Experiences Interview) were measured along with the centrality of memories (CES; Centrality of Events Scale), which refers to the degree to which distressing memories form part of one's identity, and personal meanings. Self-compassion significantly moderated the relationship between the centrality (B=0.39, p=.014, $f^2 = 1.04$, large effect size) and traumatic (B= 0.42, p=.007, $f^2 = 1.13$, large effect size) features of shame memories and eating psychopathology. The significant results suggest that higher levels of self-compassion ameliorate the effects of shame memories on eating pathology only if the traumatic and centrality features of the memories are at low to medium levels. When traumatic and centrality feature of memories are high, self-compassion is not significantly associated with reduced eating pathology.

The study by Ferreira et al. (2014) achieved a quality rating of 16/20. Though effect size was large, demonstrating the adequacy of the sample size for statistical analyses, the generalisability is limited. This study only included 34 females who have had an average of 12.6 years of education which is higher than the average reported for Portugal (8.2 years) in 2013 (UNESCO Institute of Statistics, 2013). In addition, the study did not describe the participants' ethnicity or whether they had comorbid psychiatric difficulties as is common in this clinical population.

Summary

Overall, self-compassion was generally found to partially account for some of the psychological difficulties related to traumatic experiences. Due to the cross-sectional nature of these studies, causal relationships between self-compassion and the consequences of psychological trauma could not be extrapolated from the data. In addition the studies were limited in their ability to show the impact of self-compassion in the context of developmental and temporal transitions that may affect psychopathology.

Cohort/Longitudinal data

Unlike cross-sectional designs which capture study data at a single time point, the longitudinal design allows for multiple observations over time. Zeller, Yuval, Nitzan-Assayag and Bernstein (2014) used a longitudinal design to explore the prospective relationships between self-compassion and psychological adjustment following a recent potentially traumatic event among at-risk youths aged 15-19. Sixty-four participants living in an educational residential youth village were recruited immediately following a large week-long forest fire that resulted in emergency evacuations. The authors developed an 8-item self-report questionnaire to examine specific information relating to the incident. The items included questions about proximity to the fire, injury to self and loved ones as well as emotions experienced during the event. Measures were taken at three time points: within 30 days of the event (T1), after 3 months (T2) and after 6 months (T3).

The results of the study were obtained using multi-level modelling of mediation (MLM) in which self-compassion was a putative mediator, time was a predictor, and trauma related psychopathology (suicidality, PTSD symptoms, panic, depression) and wellbeing were outcomes. The results showed that elevated levels of

self-compassion at earlier time points predicted less symptoms of depression (B=-0.23, p<.05), panic (B=-2.01, p<.01), PTSD symptoms (B=-0.17, p<.05) and suicidality symptoms at later time points (B= -0.22, p<.05). There were no significant effects of self-compassion on changes in general wellbeing over time. Dispositional mindfulness did not explain a significant portion of variance on any of the psychological outcome variables.

The study by Zeller et al. (2014) obtained a quality rating of 17/20. The longitudinal design allowed for the examination of the impact of self-compassion in long-term adjustment following trauma amongst at-risk youths. The levels of reliability on most of the questionnaires such as the MAAS and IDAS were high. However, the study used a non-validated questionnaire (Carmel Trauma Questionnaire, Zeller et al., 2014) to examine psychological distress directly related to the forest fire that participants were exposed to. Therefore, the scale can only be adapted rather than replicated for use in future research studies until this scale is validated. Another limitation of this study was that it did not examine the effects of earlier traumatic events (e.g. child maltreatment). These earlier adverse experiences may have acted as additional risk factors impacting on existing levels of self-compassion and psychopathology immediately after the traumatic event assessed in this study.

Unlike Zeller et al. (2014) who followed up youths following a potentially traumatic event, Hiraoka, Meyer, Kimbrel, DeBeer, Gulliver and Morisette (2015)assessed the relationship between self-compassion and pre-existing PTSD symptoms over time. Their sample consisted of sample of 115 U.S. combat veterans, recruited from the Central Texas Veterans Health Care System, who took part in semi-structured clinical interviews and self-report measures at baseline. They were

then asked to attend a follow up session 12 months later to repeat the semi structured interview.

The results of hierarchical regression analyses showed that self-compassion (measured at baseline) significantly predicted PTSD symptoms and trauma-related guilt at baseline (B= -.59, p<.001) and 12-month follow up, (B = -.24, p=.008) even after accounting for combat exposure. The effect size for the significant findings at baseline was large (f^2 = .67), whilst the effect size at follow up was small (f^2 =.08).

The study by Hiraoka et al (2015) achieved a quality rating of 18/20. The effect sizes reported indicate adequate sample size. Unlike the studies that have been discussed thus far, this study uses a diagnostic semi-structured clinical interview for PTSD (Clinician-Administered PTSD Scale; CAPS, Blake et al., 1995) instead of self-report measures. The interviews are also conducted by trained clinicians and masters degree students which increases the validity and reliability of the symptoms assessed. A key limitation of this study was the omission of variables concerning psychological treatment that participants may have been seeking. Receiving treatment between baseline and follow up might have had an impact on both levels of self-compassion and PTSD symptoms. This study did not measure self-compassion at follow up, missing out on the impact of any changes (reductions or increases) on the severity of PTSD symptoms. The findings from this longitudinal study may not be generalisable to individuals who have faced other types of trauma, such as childhood abuse and violence that is outside a war context.

Hoffart, Oktedalen and Langkaas (2015) observed that no studies have yet examined the role of self-compassion in mitigating negative effects of trauma, during treatment for PTSD. Hoffart et al., (2015) examined whether patients' PTSD symptoms improved or deteriorated in line with changes in self-compassion over the

course of therapy. Sixty-five patients with PTSD were randomly assigned to either an imaginal exposure intervention (IE) or imagery rescripting intervention (IR) for 10 weeks.

The results from regression analyses found that when a patient's self-judgement score was lower than usual in a given week, their PTSD symptoms were lower than usual, as assessed by the PSS-SR three days later (B= -1.122, t= -2.53, p=.011). They also found that their reported PTSD symptoms were significantly higher than usual when they had lower scores for self-judgement (B= 1.789, t=4.19, p<.003), isolation (B= 1.196, t= 3.07, p<.004) and over-identification (B= .242, t=3.02, p<0.004) score was lower than usual. Changes in self-compassion predicted subsequent PTSD symptoms, with no differences observed with therapy modality. The authors suggested lacking self-compassion served to maintain PTSD.

The study by Hoffart et al. (2015) achieved a quality rating of 19/20. The limitations of this study include the low internal consistency of the mindfulness and over-identification SCS subscales. Other possible intervening variables that may have impacted on changes in self-compassion and the severity of PTSD symptoms were not explored in this study.

Summary

The longitudinal studies suggest that self-compassion mitigates the negative impact of psychological trauma. The studies indicated that the effect remains consistent with the passage of time. However, the specific factors that interact with self-compassion and PTSD symptoms over time remain unknown.

Experimental data

      The study by Valdez and Lilly (2015) is the only one of its kind to employ an experimental design to measure the impact of pre-existing self-compassion following manipulation of trauma processing styles. Mindfulness based cognitive therapy (MBCT) which incorporates experiential-intuitive and analytic-logical processing of information has been found to be beneficial for individuals with PTSD (King et al. 2013). Valdez and Lilly (2015) hoped to investigate the role of self-compassion under these processing conditions with 63 women exposed to interpersonal trauma. A week after completion of the initial measures of self compassion, participants were randomly assigned to either an "analytic" (conceptualising), "experiential" (mindful experiencing) or a control condition involving reading positive and negative scenarios. After the processing induction, a trauma-specific interview was completed by each participant. This interview provided them with the opportunity to talk about their own trauma. Immediately afterwards, participants completed the Beck Anxiety Inventory (BAI; Beck, 1993) and Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988).

      The findings showed that prior to the induction (baseline), greater self-compassion was negatively correlated with symptoms of PTSD (self-kindness, $r = -0.40$, $p = .001$; medium effect size; mindfulness, $r = -.39$, $p = .002$, medium effect size). After the analytic processing, greater self-kindness was associated with lower negative affect, whilst greater mindfulness was linked to lower anxiety, lower negative affect and higher positive affect. In the experiential processing condition, higher self-compassion was related to greater positive affect and anxiety. In addition, common humanity correlated positively with anxiety. This suggests that greater self-

compassion lends itself to greater tolerance of anxious feelings.

The study by Valdez and Lilly (2015) achieved a quality rating of 15/28. This study had several limitations. The study used an unstandardized and non-validated trauma-specific interview adapted from the catastrophizing interview (Davey & Levy, 1998; Vasey & Borkovec, 1992) which might challenge validity. Multiple correlational analyses were conducted which may have placed the findings at risk of type 1 error. The implications of this study on future psychotherapeutic treatments is limited. The generalisability across clinical populations undergoing treatment is limited by low ecological validity. This is demonstrated by the study's reliance on data obtained from an experimental induction of information processing rather than psychological therapy.

DISCUSSION

The aims of this review set out to explore whether self-compassion is protective against the negative effects of traumatic experiences. The studies reviewed examined correlational relationships between self-compassion and different outcomes arising from actual and potentially traumatic events. Overall, the review found that self-compassion was predictive of reduced PTSD symptoms, depression, anxiety, alcohol/substance misuse, suicide attempts and emotional dysregulation. The relationship between self-compassion and wellbeing was unclear as it was only explored in 2 of 18 studies, one of which found no significant association.

The unique role of self-compassion in post-trauma psychopathology

The degree of trauma exposure has been found to be associated with decreased internal sources of resilience, including self-compassion (e.g. Tanaka et

al., 2011). Some studies actively controlled for trauma exposure in order to examine the unique role that self-compassion played in mitigating the negative effects. Self-compassion predicted post-trauma psychopathology above and beyond combat exposure during war (Hiraoka et al., 2015), childhood maltreatment (Vettese et al., 2011), emotional neglect, emotional abuse and physical abuse in childhood (Tanaka et al., 2011). The study by Jativa and Cerezo (2014) also demonstrated that self-compassion was a significant mediator in the relationship between victimisation and psychological maladjustment. The findings demonstrate that self-compassion plays a unique role in reducing post-trauma psychopathology beyond the degree of trauma exposure. These findings also support the body of research that demonstrates the unique role of self-compassion in lessening the severity of a broader range of mental health problems (e.g. Van Dam et al., 2011).

Psychological inflexibility was found to have an impact on the role of self-compassion in mitigating post-trauma psychopathology. In the study by Seligowski et al. (2014) controlling for psychological inflexibility resulted in a non-significant relationship between self-compassion and PTSD symptoms. In the study by Miron et al. (2015), the relationship between self-compassion and PTSD symptoms was only evident in those with higher psychological inflexibility.

According to the psychological flexibility model, optimal psychological health requires the ability to be open to one's internal and external environment, in a non-judgemental way (Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Hayes, et al. (2006) also discuss the importance of engagement in activities that are consistent with one's value system. Therefore, in addition to mindful openness, psychological flexibility might be linked with actions (rather than just a desire) to alleviate suffering.

The unique role of self-compassion in mitigating the negative effects of psychological trauma was also investigated in the context of trauma processing. One study found no differing relationship patterns between self-compassion and PTSD symptoms according to treatment offered (either IE or IR; Hoffart, et al., 2015). However, an experimental study showed how induced processing (either experiential or analytical) differentially impacted on the protective effects of self-compassion (Valdez and Lilly (2015). Previous processing induction experiments have also found that inducing abstract ruminative thinking about a distressing event compared with more concrete thinking, maintains distress associated with PTSD (e.g. Ehring, Szeimies & Schaffrick, 2009). The study by Valdez and Lilly (2015) adds to these findings by demonstrating the positive impact of self-compassion when mindful awareness and concrete analytic processing is encouraged.

Only four of the 18 studies examined the individual subscales of self-compassion to determine how predictive they were of post-trauma psychological outcomes. The self-kindness subscale was found to be positively associated with decreased overall PTSD symptom severity, less emotional numbing and less hyperarousal (Hoffart, et al., 2015; Valdez & Lilly, 2015). The mindfulness subscale was associated with reduced emotional numbing and hyperarousal symptoms within the PTSD cluster (Valdez & Lilly, 2015). The common humanity subscale was not significantly associated with symptoms of PTSD (Valdez & Lilly, 2015). Valdez and Lilly (2015) suggest that common humanity might not be specifically relevant to symptoms of PTSD. Comparisons cannot be made with studies that examined the broader range of trauma/maltreatment-related psychopathology as none of them explored the individual impact of each self-compassion subscale.

The Isolation, Self-judgement and Overidentification subscales were

reportedly associated with increased symptoms of PTSD as well as trauma related shame, guilt and loneliness (Hoffart et al., 2015). Thompson and Waltz (2008) found no significant correlation between any of the self-compassion subscales and PTSD symptoms. This latter finding may be reflective of weakened effects within a non-clinical population.

Seligowski et al. (2014) and Ferreira et al. (2014) separated the 6-subscales into two clusters representative of positive self-compassion components (mindfulness, self-kindness, common humanity) and negative self-compassion components (self-judgement, isolation, over-identification). The positive component of self-compassion was associated with greater trauma related psychopathology and psychological wellbeing after controlling for PTSD symptoms (Ferreira et al., 2014; Seligowski et al., 2014). However, both studies showed that the negative self-compassion component was not associated with the severity of psychopathology linked to psychological trauma. This finding challenges the utility of the negative self-compassion component in predicting trauma-related psychopathology.

Limitations of self-compassion measures used

It is important to note that the self-compassion scales used in the studies reviewed did not include factors that overlap with the traditional conceptualisation of compassion. These highlight a sensitivity to self and others' suffering with a desire to relieve it (Gilbert, 2000). In addition, this conceptualisation and the positive components of Neff's (2003b) SCS, disconnect from the so called negative components of self-compassion. Hoffart et al. (2015) suggests that the negative components on the SCS – isolation, overidentification and self-judgement – should be viewed as a separate construct entirely. Support for this distinction can be derived from the suggestion of Zeller et al. (2014) that some at-risk youth might report high

self-kindness, as well as high levels of self-judgment and isolation. This might affect the validity of a unified SCS score and how it affects its relationship to post-trauma psychopathology.

Strengths and limitations of designs and sampling

The significant results and effect sizes that were obtained (ranging from small to large), suggested that overall, the sample sizes were adequate. However, appropriate estimates of variance including range, distribution and confidence intervals were not obtained by all studies (Hiraoka et al., 2015; Thomson & Waltz, 2011; Jativa & Cerezo, 2015; Vettese et al., 2011; Miron et al., 2015; Tanaka et al., 2011; Seligowski et al., 2014; Westphal et al., 2016).

The studies examined largely collected cross sectional data, analysed using correlations, regression and path analyses. Therefore, causality cannot be implied from the analyses carried out. The few longitudinal studies reviewed allowed for the prospective testing of the impact of self-compassion on post-trauma psychopathology. However, these studies may have been improved by measuring environmental factors that may also impacted on self-compassion (e.g. social support, lifestyle, impact of psychological interventions). The only experimental study reviewed manipulated the individual's trauma processing style to demonstrate its relationship with levels of self-compassion. Still, there are significant limitations to the manipulation which was only an analog "intervention". The authors reported that that they would expect self-compassion to perform differently under standard treatment protocols. In addition, clinically meaningful symptom fluctuations could not be accessed using the one-session analog intervention applied.

Overall, the studies reviewed reflect findings from a diverse range of participants from different countries (U.S, Norway, Portugal, Canada, Israel, Spain).

Participants were of different ages (mean ages 17-45 years old) and consisted of undergraduate students, patients under the care of mental health services, at-risk youths and individuals drawn from local communities. The studies which used undergraduates might have yielded findings that are not generalisable to both general public and clinical populations. This is because the undergraduate samples may represent a group with greater resilience and positive opportunities. The links between self-compassion and post-trauma psychopathology appeared to be more prominent in samples using individuals with a PTSD diagnosis or at-risk youth. This observation is supported by research demonstrating that individuals presenting with psychopathology tend to have lower self-compassion, which leads to persisting psychological difficulties (e.g. Castilho Pinto-Gouveia, & Duarte, 2015).

Gender differences in the effect of self-compassion on post-trauma psychopathology were not explored in-depth by the studies reviewed. However, a few studies clearly reported the inclusion of demographic factors in the analyses (gender, age, income), which did not show a significant impact (e.g. Maheux & Price, 2016). Some studies only focussed data collection with females (e.g. Miron et al, 2014; Valdez & Lilly, 2015), which might limit generalisability of the findings to males who have suffered similar traumas.

Impact of Self-Compassion on PTSD vs Complex Trauma presentations

A majority of the studies reviewed sought to assess the relationship between self-compassion and PTSD symptoms, related to indexed traumatic events as specified by criterion A of the DSM-IV (APA, 1994). However, other studies assessed a broader range of psychopathology linked to traumatic experiences, which fits with the typical range of reactions experienced by victims of extensive domestic and childhood maltreatment (Courtois, 2004). In the current review, these problems

included emotion regulation difficulties, suicidality, anxiety, low mood, eating disorders and alcohol problems. Such difficulties arising from repeated trauma in early life are conceptualised as indicators of complex trauma. The after effects of complex trauma have been found to be more pervasive and resistant to treatments, compared to PTSD (Courtois, 2004).

In this review, the link between low self-compassion and increased psychopathology in individuals exposed to early trauma was robust. In particular emotional neglect, abuse or invalidation in childhood was shown to be a strong predictor of post-trauma psychopathology alongside self-compassion (Tanaka et al., 2011; Miron et al., 2014; Westphal et al., 2016). In addition, Ferreira et al. (2014) found that the protective influence of self-compassion is only present when the perceived negative impact of early trauma is less severe. These findings suggest that complex trauma presentations may relate to self-compassion in a way that differs from PTSD reactions arising from less pervasive traumas.

Typically, individuals with early onset trauma that is severe and repeated tend to have difficulties in the development of their attachment relationships (Pearlman and Courtois, 2005). Healthy, non-abusive attachments with caregivers are known to be important in developing the affiliative emotions that are central to self-compassion (Bowlby, 1973; Gilbert, 2005). It may be that individuals that face single traumas or traumatic events later in life, might have already developed the capacity to draw upon such affiliative emotions. This means that levels of self-compassion may be more amenable to improvements, which reduces psychological difficulties related to PTSD. However, in the context of complex trauma, "lessons of abuse" are incorporated into their sense of self-worth. In addition, they incorporate the belief system of their perpetrator, as well as experiencing hopelessness, guilt and

intense shame (Pearlman & Courtois, 2005). These reactions may present a significant barrier to experiencing the emotions and cognitions associated with self-compassion.

Figure 2 presents a proposed model demonstrating suggested pathways through which single event and complex traumas are linked to self-compassion and psychopathology. Further research is needed to examine this model.
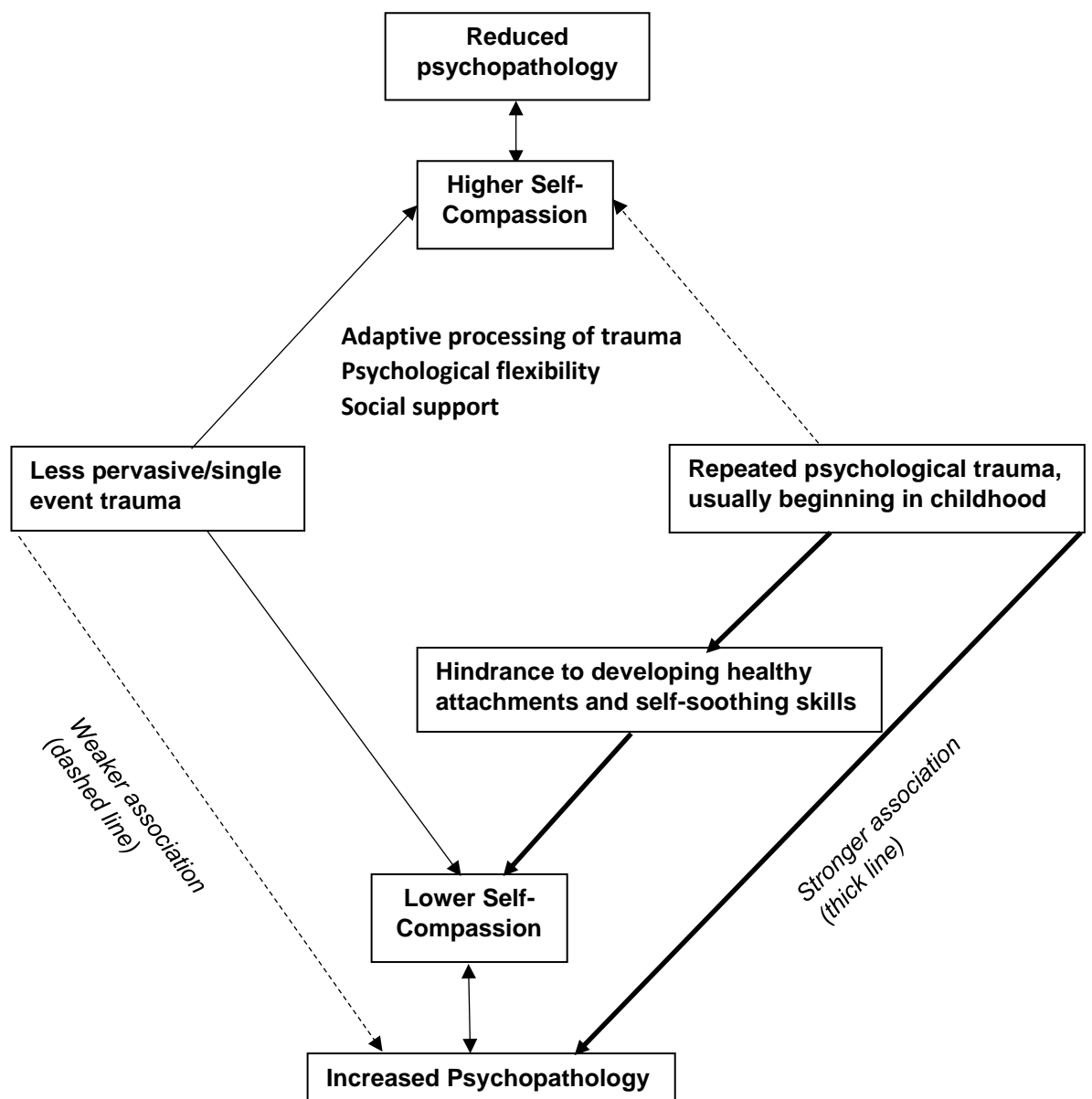
Figure 2: Suggested pathways for relationships between two psychological trauma categories (complex and non-pervasive), self-compassion, and psychopathology.

Limitations of the Review

The current review had some limitations. Only 18 published studies were examined owing to the recent emergence of interest in self-compassion as a protective factor in post-trauma outcomes. The systematic search may have missed out on valuable unpublished work. This means that the results observed in this review may have been biased, overestimating the relationships between self-compassion and post-trauma psychopathology. In order to reduce bias, a proportion of the studies reviewed (4 out of 18) were assessed for overall quality by a second researcher using the same criterion. The inter-rater reliability was 94.1% agreement. This literature review was conducted during a time when new studies were emerging, therefore, new studies may have emerged after the date that systematic searching was completed. An update of this review would be required as the research area continues to grow.

Future Research

Findings from this review support the need to conduct more research that examines differences between the psychological outcomes of individuals with less pervasive traumatic experiences and those presenting with complex trauma. These comparisons would allow the proposed model to be elaborated, demonstrating differences (if any) in the degree to which self-compassion mitigates trauma-related psychopathology. Future research should also include more longitudinal designs in order to assess the temporal changes in both self-compassion and trauma-related difficulties. This could include obtaining follow-up data from treatment seeking and

non-treatment seeking individuals to assess the impact of having psychological

therapy on changes to self-compassion and symptoms of psychological distress.

In order to investigate which individuals may be more vulnerable to post-

traumatic psychopathology, future studies could focus more on making comparisons

across trauma types. For instance, future research could assess in the impact of self-

compassion in post-trauma adjustment in individuals by affected by different types of

trauma (e.g. interpersonal violence vs road traffic or medical accidents).

The studies tended to use the same measure of self-compassion (e.g. SCS;

Neff, 2003b). Future studies should endeavour to develop and use measures of

compassion that include more traditional definitions which include having

compassion for others as well as the self (Batson et al. 1999; Neff, 2003a; Neff,

2003b). Currently, the relationship between compassion for others, self-compassion

and post-trauma adjustment remains unknown.

Although the quantitative studies presented in this review provided detailed

data related to levels of self-compassion and post-trauma outcomes, qualitative

studies should be considered. Qualitative studies would allow for the exploration of

detailed thought processes and understandings that trauma sufferers have about

themselves and any particular challenges they face with being self-compassionate.

For instance, guilt, shame, fear, grief, worthlessness and despair are emotional

experiences associated with experiences of trauma (Ehlers & Clarke, 2000; Leskela

et al., 2002; Harman & Lee, 2010). Qualitative studies may be able to provide more

detailed information about how these emotional experiences interact with self-

compassion and persisting trauma-related psychological distress.

Clinical Implications

Findings from this review support the need to develop effective

interventions that target improvements in self-compassion to reduce the severity of psychological distress arising from traumatic life events. The study that monitored progress during traditional trauma-focussed treatments showed improvements in self-compassion and PTSD symptoms over time (Hoffart et al., 2015). Emerging research has shown that interventions aimed at improving self-compassion can aid improvement in trauma-related distress. For example, Kearny et al (2013) implemented a 12-week loving-kindness meditation programme for veterans with PTSD. The study found improvements in mindfulness and self-compassion, alongside reductions in depression and PTSD symptoms. Another pilot study by Held and Owens (2015) explored the effects of a self-administered self-compassion workbook for 47 homeless veterans. The study showed improvements in self-compassion and trauma-related guilt. These preliminary findings demonstrate the need for larger-scale randomised controlled studies examining compassion-focussed interventions in individuals with histories of trauma. Participants should include both victims of early and repeated trauma (complex trauma) and victims of trauma from single events . This could be useful in demonstrating whether individual differences in treatment response is dependent on the onset, pervasiveness and duration of traumatic events.

The findings from compassion-focussed intervention pilot studies are promising and also correspond to the findings of this literature review. However, it is important to note that another explorative study by Lawrence and Lee (2014) demonstrated some difficulties that might arise with compassion-focussed interventions in the context of psychological trauma. They conducted a qualitative study exploring experiences of 7 people who had received compassion-focussed therapy for trauma. Participants had experienced both repeated trauma in childhood

and a discrete event in their adulthood. Participants reported that attempting to be self-compassionate was difficult, resulting in increases in self-criticism, fears of being vulnerable and thoughts about being undeserving of compassion. Nevertheless, participants reported that these feelings subsided as a result of the therapeutic relationship and feeling understood. This reportedly helped them to experience more positive affect and self-compassion.

Based on these findings, it may be important to develop interventions that pay attention to barriers preventing the experience of self-compassion whilst completing compassion-focussed therapy for trauma. It is likely to be important for clinicians trained in this approach to ensure they project a stance that is containing, validating and soothing, so that the client can access feelings of safeness and acceptance, which aid recovery (Gilbert, 2007).

Conclusion

The literature reviewed provides support for an association between self-compassion and post-trauma psychopathology. The strength of the association appears to vary across clinical and non-clinical populations and may be affected by other factors (e.g. psychological inflexibility, perceived social support, severity of trauma). More research in this subject area is required due to the potential implications for prevention and treatment of post-trauma psychopathology using self-compassion.

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Part Two: Empirical Paper

Exploring the barriers to generating compassionate imagery in individuals diagnosed with a personality disorder: The role of adverse childhood experiences, self-compassion and current affect.

ABSTRACT

Aims: The current evidence base suggests that individuals diagnosed with a personality disorder may experience difficulties with experiencing self-compassion. Previous experimental studies have isolated compassion-focussed imagery (CFI) for exploration as a stand-alone intervention (e.g. Gilbert & Irons, 2004; Rockliff et al., 2008, 2011). The current study aims to examine predictors of ability to engage in CFI amongst a population with a diagnosis of a personality disorder.

Methods: Fifty-three participants diagnosed with a personality disorder completed measures of self-compassion, current affect, and questionnaires related to experiences of adverse childhood experiences (ACEs). Participants were asked to complete CFI before and after the experimental manipulation of mood. Participants completed CFI outcome measures following each exercise and discussed them after completing the experiment. All those who participated were also invited to complete daily compassionate imagery exercises for one week. Measures of self-compassion were taken at the end of one week.

Results: The quantitative and qualitative results revealed that the main factors that were related to CFI outcomes included general imagery vividness, negative mood and the negative psychological impact of ACEs which included intrusive memories of childhood trauma as well as feelings of loss and rejection. There was an improvement in self-rated self-compassion after one week of practice in the 17 participants that completed the follow-up study.

Conclusions: CFI practice might be effective in managing psychological distress for some individuals with Personality Disorders. It will be important for clinicians and researchers in the area to determine whether the consequences of early trauma might be a barrier to engagement with standard forms of compassion-focussed therapy.

INTRODUCTION

According to the Diagnostic and Statistical Manual of Mental Disorders, (DSM-5; American Psychiatric Association, [APA], 2013) personality disorders are defined by "an enduring pattern of inner experiences and behaviour that deviate markedly from the expectation of the individual's culture" (p. 646). In addition, these characteristics are said to be displayed through a range of longstanding and pervasive difficulties which can include problems with impulse control, interpersonal functioning, emotional regulation, and cognition. The DSM-5 includes three clusters in which the ten diagnosable personality disorders are categorised according to descriptive similarities. Cluster A portrays individuals who seem eccentric or odd and classifies schizotypal, schizoid and paranoid personality disorders; Cluster B includes individuals who seem unpredictable, dramatic or highly emotional and classifies narcissistic, borderline, anti-social and histrionic personality disorders; Cluster C relates to individuals who seem highly fearful and anxious and classifies obsessive-compulsive, dependant and avoidant personality disorders (DSM-5, APA, 2013).

Previous research suggests that individuals diagnosed with Cluster B personality disorders use more mental health services than others (Bender et al., 2001; Jackson & Burgess, 2004) for example, individuals diagnosed with Borderline Personality Disorder (BPD). In clinical settings, those with Borderline Personality Disorder (BPD) demonstrate the tendency to present with severe emotional dysregulation. Linehan's (1993) biosocial model of affect dysregulation in BPD suggests that their difficulties are characterised by high sensitivity and reactivity to negative affective stimuli as well as a slow return to baseline after emotional arousal. In addition, this model highlights difficulties with labelling emotional states, (which

contributes to adaptive emotional regulation) and problems turning one's attention from negative emotional stimuli.

Other difficulties individuals with BPD present with include impulsivity, high risk behaviour including chronic self-harm (e.g. cutting) and recurrent suicidality, which leads to frequent use of mental health services (Lieb, Zanarini, Schmahl, Linehan & Bohus, 2004). Service use includes emergency hospitalisation, outpatient care, psychological and medical treatments as well as support within community services. BPD, as well as the other personality disorders, are also associated with high comorbidity with depression, bipolar disorder, anxiety disorders, substance misuse and social dysfunction (e.g. Trull, Sher, Minks-Brown, Durbin & Brown, 2000; Goodwin & Hamilton, 2003; Lieb, et al., 2004; Hill et al., 2008).

Given the severity and complexity of mental health and social disturbance that people diagnosed with a personality disorder present with, clinical research has attempted to develop an understanding of the causes and origins of personality disorders in order guide development of effective treatments. For example, one of the aetiological factors associated with the development of personality disorder is childhood maltreatment (Johnson, Cohen, Brown, Smailes & Bernstein, 1999). The literature has shown mixed findings in identifying the associations between particular personality disorders and forms of childhood maltreatment. A broad range of studies have found associations between child sexual abuse and BPD (Hill, 2005), whilst other studies barely find any substantial distinctions between different types of maltreatment linked with specific personality disorders according to diagnostic criteria (e.g. Rettew et al., 2003). What is clearer though, is that emotional abuse,

emotional neglect, physical and sexual abuse are associated with a broad array of

personality disorder outcomes (Tyrka, et al., 2009; Rettew et al., 2003).

As a result of evidence demonstrating the link between childhood trauma and

personality disorder development, there has been much debate concerning the

distinction between Complex Trauma and personality disorder diagnoses such as

BPD (Knefel, Tran, Lueger-Schuster, 2016). This is because Complex Trauma is said

to share similar developmental aetiological factors (e.g. early onset abuse or

maltreatment) as well symptoms (e.g. emotional dysregulation, suicidality, self-harm,

social dysfunction) (Resick et al., 2012; Frias & Plama, 2015). In addition, high rates

of comorbidity between symptoms of BPD and Post Traumatic Stress Disorder are

well documented (Cloitre, Garvert, Weiss, Carlson & Bryant, 2014). Research

suggests that individuals with BPD may be more vulnerable to stress, resulting in

comorbid PTSD symptoms (e.g. re-experiencing traumatic events, avoidance,

hyperarousal) (Frias & Plama, 2015).

In addition to being associated with personality disorder outcomes more

generally (Tyrka, et al., 2009), the negative impact of early and repeated trauma is

suggested to be linked to difficulties with being self-compassionate (Gilbert & Irons,

2005).

Neff (2003, p.87) defines self-compassion as:

> *"being touched by and open to one's own suffering, not avoiding or*
>
> *disconnecting from it, generating the desire to alleviate one's suffering*
>
> *and to heal oneself with kindness. Self-compassion also involves offering*
>
> *non-judgmental understanding to one's pain, inadequacies and failures,*
>
> *so that one's experience is seen as part of the larger human experience."*

The link between childhood maltreatment or trauma and subsequent difficulties with self-compassion can be understood in light of attachment theory (Bowlby 1969, 1973, 1980). Gilbert (2005, 2010) postulated that the capabilities for self-compassion originate from the learning and development that takes place in early attachment relationships with caregivers. Consistent protection, warmth and support in childhood has been linked with optimal emotional regulation abilities that enable self-soothing and self-compassion (Gallop 2002; Gilbert, 2010). In addition, those who have had more reliable early warmth and nurturing show a tendency to seek care, protection and support from others during times of stress. For individuals with histories of childhood abuse or maltreatment, (e.g those presenting with Complex Trauma or personality disorder), compassion from the self or others can trigger painful emotional memories from childhood adversity (Gilbert et al., 2011).

The relationship between childhood maltreatment and self-compassion was highlighted by a longitudinal study conducted by Tanaka, Wekerle, Schmuck and Paglia-Boak (2011). Young people accessing child protective services were assessed for severity of traumatic experiences using the Childhood Trauma Questionnaire (CTQ, Bernstein et al, 2003) at baseline. The youths completed a range of outcome measures at two-year follow-up, which included a measure of self-compassion. It was found that greater severity of childhood emotional abuse, emotional neglect, and physical abuse were associated with lower self-compassion.

Further studies have found that individuals who have had difficult early relationships and histories, may experience affiliative or compassionate emotions as threatening, resulting in a variety of blocking responses such as dissociation, avoidance and self-coldness (Gilbert et al., 2011; Collins & Read, 1994; Feeney & Collins, 2001; Mikulincer, Shaver, Gillath, & Nitzberg, 2005).

Compassion-Focussed Therapy (CFT) was developed to stimulate the individual's capacities for self-compassion. This is encouraged to alleviate psychological distress through adopting a caring, supportive and non-judgemental approach to oneself and one's difficulties (Gilbert, 2010; 2014; Macbeth & Gumley, 2012). Research evidence suggests that self-compassion is linked to greater wellbeing and resilience to stress, lowered levels of anxiety and depression (MacBeth & Gumley, 2012) as well as reduced trauma related symptoms (e.g. Hiraoka et al, 2015, see Literature Review for a more comprehensive summary and discussion).

According to Gilbert (2010), the CFT approach draws attention to an evolutionary-based model which focusses on the interplay between three emotional regulation systems, namely the threat system, motivational and soothing systems. The threat system is associated with negative emotions such as shame, disgust, anger, and/or fear. The motivational system is associated with excitement and drive, whilst the soothing system regulates negative emotions, attunes to the distress of the self and others, and creates feelings of warmth and safeness. Development of the soothing system helps to counteract the negative psychological effects of the threat system (Gilbert, 2010). CFT also adopts Zen principles that aim to "heal the mind" through adopting multimodal approaches to build compassion using compassionate speech, thought, behaviour, attention, meditation and imagery (Gilbert, 2010).

Research investigating the effects of CFT have found improvements in the mental health outcomes of individuals with high shame and self-criticism (Gilbert & Proctor 2006) and a wide range of mental health problems including anxiety, depression, psychosis and eating disorders (e.g. Judge, Cleghorn, McEwan & Gilbert, 2012; Braehler, et al., 2013; Ashworth, Gale, Gilbert, Read & Goss, 2014).

These findings demonstrate the utility of CFT interventions in improving emotional regulation and reducing psychological distress across a wide range of mental health difficulties.

There is currently very limited research that has explored CFT within populations diagnosed with a personality disorder. Gilbert and Irons (2004) conducted a study piloting a 4-week compassionate imagery group intervention with participants who reportedly had complex mental health difficulties for more than 10 years or "most of their lives". Eighteen showed interest in the study, but only 9 took part. Though participants largely showed improvements in self soothing abilities , a few participants reported difficulties with CFI. For one participant, their image transformed involuntarily into something unpleasant and another reported difficulties with creating a compassionate image altogether. A later study by Gilbert and Proctor (2006) was also conducted with individuals with long term complex and severe mental health difficulties. Participants who took part in the group compassionate mind treatment showed improvements in their mood and reductions in self-criticism. However, of the 9 participants (33%) who initially agreed to take part in the group treatment, three dropped out of the study.

A more recent study conducted a 16 week compassion-focussed therapy group with 10 individuals who were reported have long term complex difficulties consistent with a diagnosis of a personality disorder (Lucre & Corten, 2013). The group of participants were introduced to the evolutionary model, then were taken through an exploration of shame and self-criticism. Following this they practiced a variety of self-compassion exercises and shared their experiences with other group members. By the end of the group sessions, participants had significantly improved on all of the outcome measures. These included significant improvements in self-

compassion and decreases in depression and anxiety. There was also a trend towards improvement after one year follow up. However, of the 10 initial subjects who agreed to take part in the initial intervention, two (20%) dropped out of the study.

The results from these studies are promising and suggest that CFT has the potential to benefit individuals with complex and long term histories of mental health difficulties. However, participants who participated in the CFT studies highlighted above were all self-selected individuals who indicated that they had particular difficulties with self-criticism which they hoped to change. The rates of dropout or non-engagement from the studies suggest that there may be difficulties with engaging some individuals with complex and long term difficulties that are consistent with a diagnosis of a personality disorder. The study by Lawrence and Lee (2013) provides some preliminary findings that offer explanations behind difficulties with engaging in CFT interventions. They conducted a qualitative study exploring experiences of CFT with individuals with histories of repeated childhood trauma or trauma in adulthood who may share similar difficulties with individuals diagnosed with a personality disorder (Resick et al., 2012; Frias & Plama 2015). Some participants reported that "blocks" to engaging in CFT included a sense of fearing 'losing' self-criticism which was seen as a part of their identity. Some reported feeling undeserving or fearful of compassion and had a desire to reject self-compassion.

The limited research conducted with individuals who share similar mental health difficulties to those diagnosed with a personality disorder (e.g. Gilbert & Irons, 2004; Lawrence & Lee, 2013), suggests that there may be some barriers to engagement with CFT amongst those with a diagnosis of a personality disorder. Given this, it is important to highlight specific aspects of CFT that may be present as

a challenge to engagement for some individuals with diagnosed with personality disorder.

One of the key components of CFT is the use of compassionate imagery (Gilbert & Proctor, 2006). Previous experimental studies have isolated compassion-focussed imagery (CFI) for exploration as a stand-alone intervention (e.g. Gilbert & Irons, 2004; Rockliff et al., 2008, 2011). CFI tasks and exercises encourage individuals to develop their own ideal images of warmth, care and protection (Gibert & Irons, 2004, 2005). One of the ways to achieve this is through picturing another mind possessing compassionate emotions, motivations, and thoughts directed towards the self. Individuals engaging in compassionate image generation are also encouraged to give their imagined caregiver sensory qualities that include appearance and tone of voice (Gilbert & Proctor, 2006).

For hundreds of years, Zen traditions have made use of imagery that directs empathy, kindness and compassion towards the self (Leighton, 2003). Lee (2005) also adopted these strategies in cognitive therapy and characterised imagery consisting of these qualities as representing 'the perfect nurturer'. Gilbert and Proctor (2006) observed that though some patients generated human-like compassionate images, others experienced difficulties with this and preferred imagining non-human images such as natural scenes or animals. When people are faced with self-attacking thoughts or involuntary memories of abuse, they are invited to consider what their compassionate image would think, say, or feel towards them (Gilbert & Irons, 2005; Lee 2005). Individuals are therefore encouraged to shift their attention from threat images to compassionate ones that activate the soothing neurophysiological and psychological processing systems (Gilbert, 2010). Research has demonstrated evidence for changes in the neurophysiology following tasks involving directed

imagining. For instance, changes to white matter structures involved in mood regulation have been observed in individuals who practiced guided mindfulness meditation for two and four weeks (Tang, Lu, Fan, Yang & Posner, 2012).

Even though imagery exercises are promising for use in psychological therapy, research suggests that the ability to generate compassionate imagery is dependent on a number of factors. For example Rockliff et al. (2011) investigated the factors that were linked to the ability to generate CFI. The predictor variables includes proximal factors (affect, self-criticism and self-reassurance) as well as a factor related to the effects of early attachment relationships (attachment style). As part of the study, participants were assigned to one of two groups. In one group, participants were offered an oxytocin nasal spray, which was intended to trigger affiliative emotions, whilst the second group were given a placebo. Their findings revealed that low attachment security was associated with poorer CFI generation in the oxytocin condition, as compared to the control (placebo) condition. In addition, self-criticism and reduced self-reassurance (which is related to being self-compassionate) were associated with poorer CFI generation. The results suggest that current factors and early adverse relational experiences can have an impact on engagement with CFI.

Rationale for the study

The current evidence base suggests that the adverse childhood experiences (ACES) of individuals with personality disorders may lead to difficulties with experiencing self-compassion. The current study aims to examine predictors of ability to generate CFI amongst a population with a diagnosis of a personality disorder. Specifically, the hypothesis is that the severity of ACEs and low self-compassion will be associated with more difficulties in generating compassionate

imagery.

In addition, as previously outlined, individuals with a personality disorder diagnosis (particularly BPD) experience emotional dysregulation which includes heightened sensitivity and reactivity to negative emotional stimuli (Linehan, 1993). In light of this, the current study will also examine whether outcomes in CFI generation change following the experimental manipulation of mood within individuals with a personality disorder diagnosis.

In this study, it was important to note that CFI based on memories with humans has been found to be difficult or distressing to picture for some individuals with complex mental health problems consistent with a diagnosis of a personality disorder (e.g. Gilbert & Proctor, 2006). As a result, as a preliminary measure, this study will examine whether there is a difference in CFI outcomes after generating an image based on a memory of interaction with a person versus an image based on an imagined "ideal" compassionate figure. If preliminary findings demonstrate that there is no difference in this study, the analyses will combine the scores to reflect this.

Finally, Lawrence and Lee (2013) demonstrated the utility of exploring individuals' experiences of compassion-focussed interventions for complex trauma using qualitative methods. This method provided detailed examples of some "blocks" to engaging with CFT as well as the 'process' of developing self-compassion. The current study is the first of its kind as it is not only gathering quantitative data on CFI outcomes in individuals with personality disorder diagnoses, but also aims to explore the lived experiences obtained from recordings of group discussions at the end of testing sessions. This study will therefore acquire an in-depth understanding of the

difficulties with engagement in order to further inform adaptations of CFT interventions for individuals diagnosed with a personality disorder.

Main hypotheses

1. Higher negative mood and lower positive mood will be associated with poorer outcomes in CFI generation (which include the ease of experiencing of compassionate emotions, the degree of qualities of compassion that the image possesses and the degree of vividness of the image).

2. Following the experimental manipulation of mood, participants will demonstrate poorer performance in CFI outcomes (vividness, compassionate emotions, compassionate qualities) when levels of negative arousal are increased.

3. Individuals with lower self-compassion will report more ACES.

4. Individuals with lower self-compassion will have a reduced ability in generating compassionate imagery based on the CFI outcome measures.

5. There will be an inverse relationship between the severity of ACES and CFI outcomes.

6. ACES, Self-compassion and mood condition will interact to predict CFI outcomes. It is hypothesised that having more severe ACES, lower self-compassion and increased negative mood will be associated with poorer compassionate imagery generation (based on CFI outcome measures).

7. Individuals with greater self-compassion and less ACES will be more likely to engage in CFI practice independently for one week.

8. Practising compassionate imagery exercises independently for one week will be associated with increased self-compassion.

METHOD

Power Calculation

In order to determine the sample size required for this study, a power calculation was conducted. This was initially informed by Tanaka, et al., (2011) who explored the relationship between self-compassion and different types of childhood traumas in adolescents receiving child protective services. Tanaka et al. (2011) used the Self-Compassion Scale and the Childhood Trauma Questionnaire (the proposed measures of self-compassion and childhood trauma, see below) and found a correlation between self-compassion and emotional abuse (r=0.35, p<.05). Significant correlations with emotional neglect and physical abuse were also found. A power calculation based on Tanaka et al.'s (2011) correlational findings, specifying alpha = 5% and desired power = 80% indicated that the required sample size was estimated at 49. However, due to the planned repeated measures ANCOVA analyses that include assessing up to 16 individual predictor variables (fully described in the Design section) across two mood conditions, a further power analysis was conducted. This specified an estimated medium effect size of 0.25, alpha of 5%, desired power of 80% which indicated a required minimum sample size of 128.

Participants

The study's participants were recruited from a service based in North East London which was developed to provide specialist psychological interventions for individuals diagnosed with a personality disorder. Participants were recruited through direct mailing and advertising within the service after presentations to clinical staff. The list of participant addresses were obtained from the study's chief investigator who works within the service. Clinicians also provided e-mail addresses and phone numbers of potential participants who expressed an interest in being contacted for the study. All participants recruited had been diagnosed with a personality disorder by an expert clinician using the using the Structured Clinical Interview for DSM-IV (SCID-II; First et al 1995) for all personality disorders and Axis I clinical diagnoses. With consent from participants, their Axis I and Axis II diagnoses were provided by the service. For the purposes of this study. DSM-5 (APA, 2013) did not change the specific criteria for the diagnoses of personality disorders, therefore the SCID-II remains a valid tool.

In addition to a diagnosis of a personality disorder, participants were eligible to participate in the study if they were over 18 years old; fluent in the English language; and able to take part in a 1.5 hour-long testing session. The study's exclusion criterion included: individuals actively experiencing psychotic symptoms, those with intellectual disabilities (WAIS-V IQ below 70) and those experiencing personality changes due to a head injury. These groups were excluded due the cognitive demands needed to complete the requirements of the study. Individuals who had already completed individual or group compassion-focussed therapy were also excluded from the study.

A total of 53 participants took part in the study. All but one participant completed the demographic measures (see Table 1).

Table 1: Demographic data of sample (Total *N*=53)

Demographic category	
Age	**Mean (SD)**
	32.16 (11.12)
Gender	**N (%)**
Female	44 (83%)
Male	9 (17%)
Ethnicity	**N (%)**
White	40 (75.5%)
Asian	6 (11.3%)
Black	3 (5.7%)
Mixed Ethnicity	2 (3.8%)
Other	2 (3.8%)
Educational Status	**N (%)**
None	6 (11.3%)
GCSE	9 (17%)
A-Level	10 (18.9%)
Vocational	12 (22.6%)
Degree	9 (17%)
Postgraduate	6 (11.3%)
Employment Status	**N (%)**
Employed	12 (22.6%)
Self-employed	1 (1.9%)
Unemployed	16 (30.2%)
Homemaker	4 (7.5%)
Student	4 (7.5%)
Disability Allowance	15 (28.3%)
Relationship Status	**N (%)**
Single	34 (64.2%)
Married	10 (18.9%)
Separated	2 (3.8%)
Divorced	6 (11.3%)

Table 2: Profile of participants' duration in treatment in the service and DSM

diagnoses

Months in treatment in the service	N (%)
Not started	3 (5.7%)
Less than 6 months	28 (52.9%)
More than 6 months	22 (41.5%)
Primary Personality Disorder diagnosis	**N (%)**
Borderline	50 (94.3%)
Narcissistic	2 (3.8%)
PD Not otherwise specified	1 (1.9%)
Co-morbid Personality Disorder diagnosis	**N (%)**
Avoidant	9 (17%)
Obsessive-Compulsive	6 (11.3%)
Dependant	2 (3.8%)
Paranoid	1 (1.9%)
Co-morbid psychiatric diagnosis	**N (%)**
Major Depressive Disorder	9 (17%)
Dysthymic disorder	3 (5.7%)
Generalised Anxiety disorder	12 (22.6%)
Post-Traumatic Stress Disorder	8 (15.1%)
Panic Disorder	4 (7.5%)
Social Anxiety	3 (5.7%)
Obsessive-Compulsive Disorder	2 (3.8%)
Dissociative Identity Disorder	2 (3.8%)
Bulimia Nervosa	1 (1.9%)
Substance Misuse	7 (13.2%)

Ethical considerations

Ethical approval for this study was obtained from Camberwell St Giles

Research Ethics Committee in London. Prior to their invitation to participate in a

study session, participants were offered detailed study information in written form

(Appendix C) by their clinician, via post or e-mail. At the start of each experimental

session, written consent to participate in the study was sought from participants who

were offered more information and an opportunity to ask questions about the study.

Participants were reminded that they could withdraw from the study at any time

without the decision impacting on their ongoing psychological treatment. In order to

assist participants to manage any distress that they may have experienced through taking part in the study, they were offered a debriefing to reflect on their experiences as well as distraction or self-soothing exercises (e.g. talking about trivial topics or planning relaxing activities following the testing session). Participants were also encouraged to seek additional support by discussing any reactions or concerns they had about the impact of the study with their treating clinician. Due to the emotional vulnerability that is inherent within the clinical group, two researchers (at least one trainee clinical psychologist and a research assistant) were always present throughout the study sessions. One researcher facilitated the group session, whilst the other monitored distress levels and engagement with the tasks.

Measures

This study is part of a larger research project conducted by Iona Naismith and I as part of the requirements of a doctorate in clinical psychology. A broader range of self-report questionnaire data was initially collected including measures of more proximal immediate factors such as fear of self-compassion (Gilbert, McEwan, Matos & Rivis, 2011), forms of self-criticism/attacking and self-reassurance, (Gilbert, Clark, Hempel, Miles & Irons, 2004), experiences of shame (Andrews, Qian & Valentine, 2002) and experiences in close relationship scale (Wei, Russell, Mallinkrodt, & Vogel, 2007). These proximal factors were excluded in the analyses for the purposes of the current study. The following measures were included in this study:

Positive and Negative Affect Schedule (PANAS, Watson, Clark, & Tellegen, 1988): This 20 item scale required participants to rate to what extent they feel different positive and negative affects (e.g. excited, nervous, irritable enthusiastic, interested etc.) on a 5-point likert scale (ranging from 1 – very slightly to not at all to

5 – extremely). The PANAS has been used widely in research with clinical populations and has good psychometric properties, with high reliability and validity Watson, et al., 1988; Kitsantas, Giligan & Kamata, 2003). This scale has demonstrated Cronbach's alpha coefficients between .84 to .87 for the Negative Affect scale and .86 to .90 for the Positive Affect scale (Watson, et al., 1988). [Approximate time to complete: 2 minutes]

Self-Compassion Scale *(SCS,* Raes, Pommier, Neff & Van Gucht, 2011*):* This 12-item scale measures kindness and understanding directed to the self, in the face of failure, as well as acceptance and mindful awareness of one's experiences (Neff, 2003). Respondents are required to respond to statements such as, "When I'm going through a very hard time, I give myself the caring and tenderness I need" on a scale ranging from 1 – *almost never* to 5 – *almost always*. The scale has been found to be significantly associated with different facets of psychopathology, including Borderline Personality Disorder (MacBeth & Gumley, 2012; Krawitz 2012). Research has shown that the SCS has good psychometric properties and is also a theoretically valid measurement of self-compassion (see Neff, 2003). The SCS-12 has also been found to have good internal consistency ($\alpha = .86$, Neff, 2003). [Approximate time to complete: 2 minutes]

Childhood Trauma Questionnaire *(CTQ;* Bernstein et al., 2003)*:* This is a 28-item measure of traumatic experiences in early life. It has five factors: emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect. Items all begin with the stem "When I was growing up…" Examples of statements are: "Someone threatened to hurt me or tell lies about me unless I did something sexual with them" (from the sexual abuse scale) and "I had to wear dirty clothes" (from physical neglect scale). Responses are on a 5-point scale ranging from 1 – *never true*

to 5 – *very often true*. The CTQ defines emotional abuse as "verbal assaults on a child's sense of self-worth or wellbeing or any humiliating or demeaning behaviour directed towards a child by an adult or older person". Emotional neglect was defined as "the failure of caretakers to meet children's basic emotional and psychological needs including love, belonging nurturance and support" (Bernstein et al., 2003). The scale has been shown to have strong psychometric properties. Internal reliability for the CTQ has been found to range between .69 (physical neglect) to .94 (sexual abuse) (e.g Tanaka et al., 2011). [Approximate time to complete: 4 minutes]

Early Memories of Warmth Scale (EMWS, Richter, Gilbert & McEwan, 2009). The EMWS measures recollections of feelings of safety, warmth and being cared for in childhood. The 21 items include statements such as "I felt cared about", "I felt appreciated the way I was" and "I felt part of those around me". Participants are required to respond on a 5-point likert scale (0 – *no, never* to 4 – *Yes, most of the time*). The scale has been found to correlate with behaviours and responses related to self-soothing, self-reassurance depression, stress and anxiety. The scale has been reported to have good psychometric properties including test-retest reliability and good internal consistency ($\alpha = 0.97$, Richter, et al, 2009). [Approximate time to complete: 3 minutes].

Invalidating Childhood Environments Scale *(ICES; Mountford et al., 2007):* The ICES is designed to measure the degree of exposure to parental invalidation retrospectively. It consists of 14-items that assess both maternal and paternal behaviours (e.g. "If I was happy, my parents would be sarcastic and say things like, "What are you smiling at?"). Participants areasked to rate their experiences of each parent up to the age of 18 years on a 5-point scale (1 – *never* to 5 *all the time*). The themes identified are based on Linehan's (1993) definitions of an

invalidating environment which has been frequently found to be associated with the development of borderline personality disorder traits (e.g. Robertson, Kimbrel & Nelson-Gray, 2013). A further 4 items reflect a broader representation of family style, three of which reflection an invalidating family environment ('typical', 'perfect', 'chaotic') and one that is emotionally supportive ('validating'). These are rated on a 5-point scale (1-*not like my family* to 5 – *like my family all of the time*). The scale has been found to have good validity and internal consistency (maternal invalidation α = .90, and paternal invalidation α = .88) (Mountford et al., 2007). [Approximate time to complete: 3 minutes]

Measurements of compassionate imagery outcomes

Following completion of the compassion-focussed imagery (CFI) tasks, participants were required to answer a series of questions regarding their experiences. These sets of questions were related to the three main outcome variables:

1. Ease of experiencing compassionate emotions (CFI Emotions)

In order to measure this outcome variable, participants answered the question, "How easy did you find it to experience receiving the compassionate emotions" and were asked to rate their experiences on a 1-10 Likert scale. Higher scores referred to greater ease of experiencing compassionate emotions. This question was derived from the Rockliff et al., (2011) CFI study.

2. Vividness of compassionate imagery (CFI vividness)

In order to measure this outcome variable, we selected the four imagery questions used by Kelly, Zuroff, Foa and Gilbert (2010) in a study which conducted training in compassionate imagery. These questions, originally derived from Marks (1973) asked participants: To what extent could you, "hear the voice of the image", "see

the facial expressions of the image", "visualize gestures of the image"," picture it interacting with you" (All rated from 1 – no image at all, to 5 – clear as if in person).

3. Perceived qualities of compassion of evoked by the imagery (CFI qualities)

Based on literature describing key components and qualities of a compassionate 'other', (e.g. Gilbert, Baldwin, Irons, Baccus & Clark, 2006), four questions derived from Rockliff et al. (2011) were selected for the study. Participants were asked to rate on a 1-10 point likert scale to what degree their compassionate image had wisdom, strength, dependability, warmth and kindness. Higher scores referred to greater degree of compassionate qualities evoked by the imagery.

Measurement of effort applied to imagery exercises

The degree of effort applied to generating the compassionate imagery was measured by the question "How hard did you try to create a visual image for the compassionate emotions to come from?" Participants were asked to indicate their degree of "effort" on a 1-10 likert scale. This question was derived from the study by Rockliff et al. (2011). The degree of "effort" will be considered as a potential predictor of CFI outcomes.

Assessment of positive imagery generation

Positive general imagery generation was assessed using similar measures used for the compassionate imagery outcomes. The measures assessed the ease of experiencing positive emotions and the vividness of the image (four questions pertaining to hearing "sounds", "picturing the image clearly", "visualising movement" and finally, "interaction with the image"). Outcomes for positive general imagery were subsequently used as a predictor of CFI outcomes. See Appendix D for the full list of questions used.

Procedure

Figure 1 provides a visual representation of the testing session sequence. Participants were invited to attend a group session. Sixteen sessions were held in total, with a minimum of 1 person, an average of 3.5 people and a maximum of 12 people in one group. Participants completed all the self-report measures relating to childhood trauma, self-compassion and current mood (PANAS) which began the stem: "please indicate to what extent you feel this way right now".

After completing the questionnaires the participants were asked to start by picturing a positive general image and involved imagining a relaxing beach. Following this, participants were guided through a definition of compassion and a summary about the importance of developing self-compassion based on empirical research. The instructions for imagery generation were scripted by Gilbert (2010) and read out loud by one of the researchers (see Appendix E for the written instructions). Participants were given the opportunity to have a brief practice round to help them become accustomed to imagining a compassionate image and ask any questions before the main task began.

Experimental manipulation of imagery type

In order to explore whether compassionate imagery "type" made a difference to imagery generation, participants were exposed to either one of two conditions. Half of all the sessions conducted asked participants to imagine the "compassionate ideal" (where they conjured up an idealised image of a living being or inanimate object feeling compassion for them). The other half asked participants to imagine "a compassionate figure from memory" (i.e. person who showed them kindness in the past). Each imagery exercise was followed by completion of the imagery experience measures outlined (Appendix E).

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N.B. If the analyses demonstrated no significant difference between the two imagery conditions, they would be combined as one variable.

Experimental manipulation of mood and negative arousal

The participants were asked to recall a vivid memory of a difficult interpersonal experience and hold it in mind for one minute. Participants were given a rationale for this task as follows:

"As part of this study, we are also interested in how clearly you can picture a difficult memory from a past relationship. It is useful for us to know how you manage this, but if this becomes too distressing feel free to stop the exercise and wait till the end. When you feel ready, please bring to mind a memory of having been criticized or rejected by someone who matters to you…"

Participants were then asked to rate how easy it was to hold the image in mind on a 10-point likert scale (ranging from 1 – *not easy at all* 10 – *extremely easy, it was automatic*) and how upset they felt while viewing the image (ranging from 1 – *not upset at all* to 10 – *extremely upset*). Following this, they completed the PANAS to measure current mood, beginning with the stem "please indicate to what extent you feel this way right now". This was followed by a final compassionate imagery generation task.

Qualitative discussions on the experiences of compassionate imagery exercises

At the end of the testing session, participants were asked a range of open-ended questions within the group to elicit their individual experiences of the tasks. The questions included, "How did you find it?", "Did any thoughts, emotions, memories or images get in the way?", "What would help you engage with it more?".

Follow up

Participants were asked to practice the compassionate imagery task that they had been introduced to twice a day for one week. They were each given their own instructions to help them complete the exercises at home. Each participant was texted once daily to prompt them to practise the CFI exercises. At the end of the week, participants were asked to complete a questionnaire measuring their level of self-compassion (using the SCS-12), reporting on how often they practised, and any obstacles they faced in committing to practising CFI. Participants completed these follow-up questions on an online system accessible using a URL link, sent to participants via text message or e-mail.

Participants were offered a £10 high street shopping voucher after completion of the initial testing session and an additional £5 was posted to them after completing follow-up questionnaires.

Design

This section demonstrates the sequence of study procedures that participants underwent as well as highlighting the outcome and predictor variables.

N= 53
Completion of measures: SCS, CTQ, EMWS, ICES, PANAS (other study FOC, FoSC/SA, EoS, ECRS) *(30 mins)*

N= 53
Practicing positive imagery & completing positive imagery measures *(6 mins)*

N=25
Introduction to compassion and compassionate imagery
Compassionate imagery task based on memory followed by CFI Imagery measures *(20 mins)*

N=28
Introduction to compassion and compassionate imagery
Compassionate imagery task based on an imagined "ideal" followed by CFI Imagery measures *(20 mins)*

N=53
1. Experimental manipulation of mood
2. Interpersonal stress imagery questions
3. Measure of current mood (PANAS) *(10 mins)*

N=25
Compassionate imagery task (from memory) followed by CFI imagery measures *(8mins)*

N=28
Compassionate imagery task (from imagined ideal) followed by CFI imagery measures *(8mins)*

N=53
Qualitative feedback *(15mins)*

N=17
(Optional) 1 week practice, followed by online questionnaires, including the SCS

Figure 1: Study sequence

Main Intervention

Compassionate imagery practice, either from memory (N=25) or an imagined "ideal" (N=28) before and after the experimental manipulation of mood (N=53).

Outcome variables (Dependent variables)

1. Compassionate Emotions (measured by 1 item assessing the ease of experiencing compassionate emotions).

2. Compassionate Imagery Vividness (measured by a total of 4 items assessing vividness of imagery).

3. Compassionate Qualities (measured by a total of 4 items assessing compassionate qualities).

Predictor variables (Independent Variables)

1. Mood condition (pre-mood manipulation outcomes vs post mood manipulation outcomes). This is a within subjects variable

2. Imagery type (Participants who imagined an "ideal" compassionate figure vs participants who imagined a memory of a compassionate figure. This is a between variable.

3. Effort applied to compassionate imagery exercises

4. General imagery vividness (measured by the 4 items assessing the vividness of positive imagery)

5. Self-compassion (measured by the SCS)

6. Adverse childhood experiences (as measured by the ICES {six subscales}, CTQ {five subscales} and EMWS.

7. Degree of Positive and Negative mood (as measure by the PANAS).

Follow up study

Outcome variable (dependent variable)

1. One week follow-up self-compassion scores of the completers

2. Whether participants dropped out or remained in the study

Predictor variables (Independent variables)

1. Original Self-compassion scores for completers vs those who dropped out

2. ACES for completers vs those who dropped out

3. Any other predictors found to have correlated with CFI outcomes in the main experimental study

RESULTS

Adverse Childhood Experiences Reported

The most common type of childhood trauma reported on the CTQ was emotional neglect (*m*=17.58), followed by emotional abuse (*m*=17.18), physical neglect (*m*=11.49), physical abuse (*m*=11.39) and sexual abuse (*m*=11.38). This pattern did not differ between males and females.

Despite abuse and neglect representing extreme forms of childhood invalidation, there was no significant difference between experience of maternal invalidation (*m*=42.86) and experience of paternal invalidation (*m*=45.50) as reported via the ICES (t(52) = -1.139, *ns*). The most highly rated "family types" participants reported they belonged to (ICES scale) were the "typical family" (*m*=3.55), followed by the "perfect family" (*m*=3.38), and the "chaotic family" (*m*=3.09). The emotionally supportive "validating family" type received the lowest ratings (*m*=2.22).

On the EMWS, 16.7% reported that they had no early memories of warmth (scoring zero out of 84). Fifty percent of participants had a total score of 9 out of 84 or less on the EMWS.

Data preparation for hypothesis testing using quantitative analyses

Tests of normality and transformations

All quantitative data underwent statistical analyses using SPSS 22 (IBM Corp, 2013). All the continuous variables underwent preparatory analyses to determine whether they were normally distributed, which is required for parametric statistical tests. All variables' distributions were examined for their degree of skewness (lack of symmetry) and kurtosis (flatness or pointedness). The Kolmogorov-Smirnov (K-S) test was also run in order to determine the normality of each continuous variable.

Table 3 shows the results of the tests of normality and Table 4 shows descriptive data (including transformed means and standard deviations in brackets).

Table 3: Tests of normality for continuous variables

| | Kolmogorov-Smirnov Tests | | Skewness | Kurtosis |
	Statistic	Sig. (*p*-value)	Statistic	Statistic
EMWS	.192	.000**	1.463**	1.558**
SCS	.171	.001**	.746**	-.488
SCS Follow up	.133	.200	.780	.069
General Imagery vividness	.108	.184	-.064	-.721
Positive Mood (pre-mood manipulation; MM)	.113	.161	.163	-.806
Negative Mood (pre MM)	.138	.021**	.328	-1.093
Positive Mood (post MM)	.128	.043**	.834**	-.162
Negative Mood (post MM)	.114	.130	-.316	-.957
Emotional abuse	.177	.001**	-.489	-1.212
Physical abuse	.213	.000**	.808**	-.735
Sexual abuse	.264	.000**	.730**	-1.191
Emotional neglect	.149	.009**	-.396	-.964
Physical neglect	.158	.004**	.421	-.811
CTQ Total	.085	.200	.349	-.790
ICES Maternal	.089	.200	.045	-.861
ICES Paternal	.099	.200	-.222	-.866
ICES "Chaotic Family"	.203	.000**	-.084	-1.611**
ICES "Validating Family"	.286	.000**	.826**	-.795
ICES "Perfect Family"	.242	.000**	-.431	-1.509**
ICES "Typical Family"	.241	.000**	-.659	-1.143
Compassionate Emotions (pre MM)	.152	.007**	.408	-.633
Compassionate Emotions (post MM)	.101	.200	.240	-.751
CFI vividness (pre MM)	.133	.031**	-.057	-1.090
CFI vividness (post MM)	.146	.011**	-.028	-1.228
CFI Qualities (pre MM)	.119	.078	-.331	-.901
CFI Qualities (post MM)	.106	.200	-.329	-.929

** Indicates significant values at the p<.05 level.

In addition to removing 3 outliers from the EMWS, square root transformations were conducted in order to improve normality of the distributions for the following variables: EMWS; SCS; Negative mood (pre- and post -mood manipulation); positive mood (pre and post-mood manipulation); all the subscales of the CTQ (Emotional abuse; Emotional neglect; Physical neglect; Physical abuse; Sexual abuse); all of the four family types ("chaotic", "perfect", "typical" and "validating"); CFI emotions, pre and post-mood manipulation; CFI vividness both pre and post mood manipulation. Variables obtained from measurements at pre and post mood manipulation that were previously non-normal were transformed along with corresponding variables with more normal distributions. This was done in order to equalise the units measurement for the purpose of comparing their differences in further analyses (Field, 2013).

Table 4: Descriptive data of continuous variables (The means and standard deviations of transformed data are in brackets).

Variable	Minimum	Maximum	Mean	Standard Deviation
CTQ Emotional neglect	5	25	17.58 (4.12)	5.83 (.73)
CTQ Physical neglect	5	21	11.49 (3.32)	4.63 (.68)
CTQ Physical Abuse	5	25	11.39 (3.23)	6.77 (.95)
CTQ Sexual abuse	5	25	11.38 (3.19)	7.86 (1.11)
CTQ emotional abuse	5	25	17.18 (4.05)	6.41 (.83)
CTQ Total Score	33	119	69.03	23.67
ICES Maternal	11	70	42.86	15.89
ICES Paternal	17	70	45.50 (6.64)	15.06 (1.17)
ICES Chaotic family	1	5	3.09 (1.69)	1.64 (.48)
ICES perfect family	1	5	3.38 (1.77)	1.57 (.49)
ICES validating family	1	5	2.22 (1.42)	1.42 (.45)
ICES typical family	1	5	3.55 (1.82)	1.57 (.47)
EMWS score	0	46	14.21 (3.51)	14.07 (2.44)
Self-compassion score	12	44	22.97 (4.71)	8.47 (.86)
CFI qualities pre-manipulation	4	40	23.60	10.57
CFI qualities post-manipulation	4	40	22.75	11.66
Compassionate emotions pre-manipulation	1	10	4.35 (1.98)	2.51 (.63)
Compassionate emotions post-manipulation	1	10	4.37 (1.98)	2.57 (.65)
CFI vividness pre-manipulation	4	20	11.73 (3.35)	4.53 (.69)
CFI vividness post-manipulation	4	20	11.57 (3.29)	5.57 (.86)
Vividness of general imagery	3	15	9.15	3.49
Negative emotions pre-manipulation	10	45	24.71 (4.86)	10.33 (1.04)
Negative emotions post-manipulation	10	50	33.56 (5.70)	11.20 (1.03)
Positive emotions pre-manipulation	10	37	21.32 (4.55)	7.23 (.79)
Positive emotions post-manipulation	10	37	18.66 (4.24)	7.31 (.81)

Internal consistency of CFI outcome measures and general positive imagery outcome: CFI Vividness, CFI Qualities, General positive imagery vividness.

In order to examine the internal consistency of two of the CFI outcome measures with multiple items (CFI vividness and CFI qualities), Cronbach's alpha calculations were conducted.

CFI vividness

The analysis demonstrated that the four items of the compassionate imagery vividness scale (relating to voice, facial expression, gestures, interaction) showed good levels of internal consistency (pre-mood manipulation, $\alpha = 0.89$; post-mood manipulation, $\alpha = 0.96$).

CFI Qualities

The analysis showed that the four items of the qualities of compassion scale (relating to wisdom, kindness, dependability and strength) showed good levels of internal consistency (pre-mood manipulation, $\alpha = 0.93$; post-mood manipulation, $\alpha = 0.97$).

General Positive imagery

Cronbach's alpha was also conducted for the 3 items on the general imagery vividness scale ($\alpha = 0.89$) including "hearing sounds", "seeing the image clearly" and "visualise its movement". The calculation excluded the "interaction with imagery" question as it did not correlate with the other items. This was assumed to be a result of the general imagery relating to a place rather than another "mind" that would evoke reciprocal interaction (for example one of the instructions during the compassionate imagery exercises is to imagine "how you would like your compassionate image to relate to you?" – Appendix E).

Correlations between outcome variables

Correlations of all of the outcome measures showed that compassionate emotions, vividness of CFI and qualities of CFI were nearly all significantly correlated with each other before and after mood manipulation. In addition, general imagery vividness was also found to correlate with five out six CFI outcome variables (Table 5).

Table 5. Correlations between General imagery vividness and CFI outcome variables (at pre and post mood manipulation).

	CFI Qualities (post)	CFI Vividness (post)	Compassionate Emotions (post)	CFI Qualities (pre)	CFI Vividness (pre)	Compassionate Emotions (pre)
General Imagery Vividness	.476**	.548**	.238	.345*	.467**	.295*
Sig.	.0001	.0001	.093	.011	.0001	.034
Compassionate Emotions (Pre)	.468**	.329*	.440**	.636**	.549**	1
Sig.	.001	.019	.001	.0001	.0001	
CFI Vividness (Pre)	.459**	.530**	.273	.513**	1	-
Sig.	.001	.0001	.052	.0001		
CFI Qualities (Pre)	.639**	.347*	.381**	1	-	-
Sig.	.0001	.012	.006			
Compassionate Emotions (Post)	.605**	.687**	1	-	-	-
Sig.	.0001	.0001				
CFI Vividness (Post)	.693**	1	-	-	-	-
Sig.	.0001					
CFI Qualities (post)	1	-	-	-	-	-

*Indicates significance at the p<.05 level;
**Indicates significance at the p<.01 level

Exploration of differences between imagery conditions

In order to determine the appropriateness of using statistical analyses that consider the influence of the two different imagery conditions, (picturing the "ideal" compassionate other vs an image from a past memory), independent samples t-tests were conducted. The test confirmed that there were no significant differences in CFI generation between participants who imagined the "ideal" compassionate other (*N*=28) or those who created the image from a memory (*N*=25). Therefore, the CFI outcomes were analysed without separating the data according to imagery condition. Table 4 shows the basic descriptive data (means and standard deviations), t-test statistics and *p*-values.

Table 6: T-test results showing no significant differences in CFI outcomes across imagery conditions (compassionate imagery from memory vs ideal).

	Mean(SD)		T Statistic	*df*	Sig. (*p*-value)
Compassionate Emotions (pre)	Memory image Ideal image	1.93(.59) 2.03(.68)	-.532	50	.597
CFI Vividness (pre)	Memory image Ideal image	3.24(.73) 3.45(.67)	.397	49	.693
CFI Qualities (pre)	Memory image Ideal image	23.16(9.66) 24.00(11.49)	-1.086	51	.283
Compassionate Emotions (post)	Memory image Ideal image	2.02(.67) 1.95(.65)	-1.003	50	.766
CFI Vividness (post)	Memory image Ideal image	3.16(.87) 3.40(.86)	-.286	51	.776
CFI Qualities (post)	Memory image Ideal image	20.28(10.02) 25.03(12.76)	-1.487	50	.143

Exploration of the impact of Effort applied to compassionate imagery

The amount of effort applied to compassionate imagery analyses was not correlated to any of the three CFI outcome measures across both mood conditions. Therefore the variable was excluded from the analysis.

HYPOTHESIS 1: Higher negative mood and lower positive mood will be associated with poorer outcomes in CFI generation. (Table 7)

CFI Vividness

Partially in line with the first hypothesis, higher negative mood was significantly correlated with poorer CFI vividness after the mood manipulation (r= -.330, p<0.017) but not before (r = -.170, p=.233). As a part of the analyses, Bonferroni corrections were applied by dividing the significant critical p-value (0.05) by the number of correlations made (0.05 divided by 6). This was calculated to be (p=0.008). This was applied throughout the analyses assessing Hypothesis 1. The significant relationship between negative mood and CFI vividness at post-mood manipulation did not remain significant after accounting for multiple correlations. Positive mood was not significantly correlated with CFI vividness before mood manipulation (r=.193, p=.167) or after it (r=.232, p=0.098).

CFI Qualities

As predicted, higher negative mood was significantly correlated with CFI qualities before (r=-.363, p=0.008) and after mood manipulation (r=-.280, p=.044). Only the significant relationship observed at pre-mood manipulation remained significant level following correction for multiple correlations. Positive mood was not significantly associated with CFI qualities before mood manipulation (r=.237, p=.088) or after (r=.125, p=.379).

Compassionate Emotions

As predicted, higher negative mood was significantly correlated with reduced experiences of compassionate emotions before (r=-.380, *p*=.005) and after mood manipulation (r=-.324, *p*=.020). Only the significant relationship observed at pre-mood manipulation remained significant following correction for multiple comparisons. Higher positive mood was significantly correlated with greater experiences of compassionate emotions at before mood manipulation (r=275, *p*<.049). This effect did not remain significant after correcting for multiple correlations. There was no significant association between positive mood and compassionate emotions after mood manipulation (r=.256, *p*=.070).

Table 7: Association between self-reported mood on the PANAS and Compassionate imagery outcomes pre and post mood manipulation.

		CFI Vividness		*CFI Qualities*		*Compassionate Emotions*	
		Pre	*Post*	*Pre*	*Post*	*Pre*	*Post*
Negative mood	**Pearson's correlation**	-.170	-.330*	***-.363****	-.280*	***-.380****	-.324*
	Sig.	.223	.017	*.008*	.044	*.005*	.020
Positive mood	**Pearson's correlation**	.193	.232	.237	.125	.275*	.256
	Sig.	.167	.098	.088	.379	.049	.070

*Indicates significance at the p<.05 level
**Indicates significance at the p<.01 level
The values in **bold and italics** remained significant after correction for multiple comparisons at the 0.008 level.

HYPOTHESIS 2: Following the experimental manipulation of mood, participants will perform worse on the compassionate imagery exercises when levels of negative arousal are increased.

Preliminary analysis: Determining if the mood manipulation significantly changed mood

In order to determine whether the mood manipulation was successful, a paired samples t-test was conducted to compare PANAS scores across conditions. The test demonstrated that there was a significant increase in negative mood, (t(51) = -6.45, p<.0001) from pre-manipulation (*m*=4.8, sd=1.03) to post-manipulation (*m*=5.7, sd=1.04). Inversely, there was a significant decrease in positive mood (t(51)=3.59, p=0.001) from pre-manipulation (*m*=4.56, *sd*=.79) to post manipulation conditions (*m*=4.2, *sd*=.81).

Comparisons of CFI outcomes from pre to post mood manipulation

Despite the significant change in mood as reported above, Hypothesis 2 was not supported by the findings. Paired samples t-tests were conducted in order to determine any differences between each of the CFI outcome measures. There were no significant differences in CFI qualities reported (t(51)=.539, *p*=.592) before (*m*=23.46, *sd*=10.62) and after mood manipulation (*m*=23.75, *sd*=11.66). There were no significant differences in CFI vividness reported (t(51)=.537, *p*=.594) before (*m*=3.34, *sd*=.71) and after mood manipulation (*m*=3.29, *sd*=.87).There were no significant differences in compassionate emotions reported (t(49)=-.350, p=.728) before (*m*=1.96, *sd*=.63) and after mood manipulation (*m*=1.99, *sd*=.65).

HYPOTHESIS 3: Individuals with lower self-compassion will report more ACES

Partially in line with the prediction, lower self-compassion was significantly

related to less early memories of warmth (r=.426, *p*=.002) higher total scores on the

CTQ (r=-.271, *p*=.05), higher reports of physical neglect (r=-.371, *p*=.006), higher

ratings of belonging in a "perfect family" (r=-.394, *p*=.0035) and lower ratings of

belonging in a "validating family" (r=.284, *p*=.040). The significant findings between

self-compassion and early memories and warmth and ratings of belonging in a

"perfect family" remained significant after correcting for multiple comparisons using

the Bonferroni correction (p=0.0038).

However, self-compassion was not significantly associated with emotional

abuse (r=-.258, *p*=.062), emotional neglect (r=-.182, *p*=.192), sexual abuse (r=-.099,

p=.479), physical abuse (r=-.168, *p*=.229), maternal invalidation (r=-.173, *p*=.215),

paternal invalidation (r-.213, *p*=.126), ratings of membership in a "chaotic" family

(r=-.233, *p*=.093) and "typical" family (r=.025, *p*=.861).

**HYPOTHESIS 4: Individuals with lower self-compassion will have a reduced
ability in generating compassionate imagery.**

In order to test the above hypothesis, a Pearson's correlational analysis was

conducted to determine whether self-reported self-compassion was significantly

associated with any of the CFI outcomes. Contrary to the hypothesis, the findings

showed that self-compassion was not significantly associated with CFI vividness

before (r=.057, p=.685) and after (r=-.038, p=.792) mood manipulation. Self-

compassion was also not significantly associated with CFI qualities before (r=-.184,

p=.186) and after (r=-0.14, p=.921) mood manipulation. Finally, self-compassion

was not significantly associated with Compassionate emotions before (r=.152,

p=.282) and after (r=.169, p=.236) manipulation of mood.

HYPOTHESIS 5: There will be an inverse relationship between the severity of ACES and the ability to generate and engage with compassionate imagery.

A Pearson's correlation was conducted in order to investigate whether there was a significant association between different measures of ACES (ICES, EMWS,CTQ) and the ability to generate and engage with CFI using the three outcome measures (CFI vividness, CFI qualities, Compassionate emotions) across the two mood conditions. Results showing significant findings at the .05 level and non-significant findings, are presented in Table 8.

Associations between CFI Vividness and ACES

Contrary to the prediction, Pearson's correlations showed that none of the measures of ACES (including their subscales), were significantly correlated with CFI vividness before and after mood manipulation at the .05 level (Table 8).

Associations between CFI Qualities and ACES

Pearson's correlations revealed that the CTQ subscale Emotional Neglect was significantly associated with CFI qualities only before the mood manipulation (r=-.303, p=.028). However, this finding is not significant after correcting for multiple comparisons. None of the other measures of ACES were significantly associated with CFI qualities at the .05 level (Table 8).

Associations between Compassionate Emotions and ACES

Pearson's correlations showed that lower ratings of experiences of compassionate emotions was significantly associated with higher Emotional Neglect (r=-.314, *p*=.025) and Physical Neglect (r=-.295, *p*=.035) only after the mood manipulation. Lower ratings of compassionate emotions were also associated with higher Paternal Invalidation (r=.297, p=.034) and greater ratings of membership in a "chaotic family" (r=.314, p=.025) and "perfect family" (r=.315, p=.025). These

findings did not reach significance after they were corrected for multiple

comparisons using the Bonferroni correction (p=0.0019). None of the other measures

of ACES were significantly associated with Compassionate emotions at the .05 level

(Table 8).

Table 8: Association between ACES and CFI outcomes

		CFI Vividness		CFI Qualities		Compassionate Emotions	
		Pre	*Post*	*Pre*	*Post*	*Pre*	*Post*
CTQ Total	**Pearson's r**	-.020	-.039	-.242	-.123	-.068	-.254
	Sig.	.885	.785	.080	.384	.634	.072
CTQ Emotional neglect	**Pearson's r**	-.164	-.212	**-.303***	-.099	-.266	**-.314***
	Sig.	.241	.132	**.028**	.483	.057	**.025**
CTQ Physical Neglect	**Pearson's r**	.066	.022	-.199	-.057	-.148	**-.295***
	Sig.	.641	.877	.154	.686	.295	**.035**
CTQ Emotional abuse	**Pearson's r**	-.040	-.067	.068	-.037	.047	-.077
	Sig.	.775	.635	.628	.796	.740	.589
CTQ Physical abuse	**Pearson's r**	.014	.078	-.237	-.077	-.014	-.151
	Sig.	.923	.581	.087	.590	.923	.291
CTQ Sexual abuse	**Pearson's r**	.050	.025	-.202	-.144	.074	-.143
	Sig.	.723	.861	.148	.307	.601	.316
ICES Paternal	**Pearson's r**	-.061	-.182	-.151	-.077	-.084	**-.297***
	Sig.	.666	.195	.279	.588	.552	**.034**
ICES Maternal	**Pearson's r**	.065	.113	-.086	.097	-.019	.011
	Sig.	.643	.426	.539	.492	.894	.940
ICES Chaotic family	**Pearson's r**	.028	-.023	-.131	-.020	-.052	**-.314***
	Sig.	.841	.871	.349	.890	.717	**.025**
ICES Perfect family	**Pearson's r**	-.136	-.164	.046	-.109	-.016	**-.315***
	Sig.	.331	.244	.743	.440	.910	**.025**
ICES typical family	**Pearson's r**	-.034	-.159	-.039	-.130	-.030	-.206
	Sig.	.811	.259	.783	.360	.835	.148
ICES validating family	**Pearson's r**	.046	.041	.045	.072	.147	-.124
	Sig.	.743	.774	.749	.613	.299	.386
EMWS	**Pearson's r**	.078	.074	.245	.107	.235	.270
	Sig.	.582	.606	.080	.457	.096	.058

*Indicates significance at the .05 level

HYPOTHESIS 6: ACES, Self-compassion and mood condition will interact to predict compassionate imagery generation. Therefore, having more severe ACES, lower self-compassion and increased negative mood will be associated with poorer compassionate imagery generation.

In order to test the above hypothesis, a repeated measures analysis of covariance (RMANCOVA) was conducted using each of the three outcome variables (Compassionate emotions, vividness of CFI, and qualities of CFI) entered as the dependent variable. Self-compassion (as a key predictor variable and measured outcome of the CFI intervention at follow-up) was included as a predictor a priori. In addition, general imagery ability (Table 5), emotional neglect, physical neglect, paternal invalidation, membership in a "perfect" family and "chaotic" family (Table 8) were added because they significantly correlated with CFI outcomes. Finally, all three CFI outcomes measured at pre- and post-mood manipulation were entered as repeated-measures to reflect the two mood conditions.

Predictors of Qualities of Compassion

Contrary to the hypothesis, none of the independent variables significantly predicted ratings of CFI qualities. The results were as follows: Mood condition ($F(1,44)$= 3.379, p=.073, ηp^2 = .071), General Imagery vividness (F(1,44)=3.645, p=.063, ηp^2 =.077), Self-compassion (F(1,44)=1.084, p=.304, ηp^2 =.024) Emotional Neglect (F(1,44)=2.494, p=.121, ηp^2 = 0.054), Physical Neglect (F(1,44)=.015, p=.904, ηp^2 =.0001), Paternal Invalidation (F(1,44)=.089, p=.767, ηp^2 =.002), membership in a "perfect" family (F(1,44)=2.342, p=.133, ηp^2 =.051) and "chaotic" family (F(1,44)=.036, p=.850, ηp^2 = .001).

Predictors of Vividness of CFI

None of the independent variables significantly predicted ratings of CFI qualities. The results were as follows: Mood condition ($F(1,44)$=.734, p=.396, ηp^2 = .016), General Imagery vividness ($F(1,44)$=1.733, p=.195, ηp^2 = .038), Self-compassion ($F(1,44)$=.772, p=.325, ηp^2 =.017) Emotional Neglect ($F(1,44)$=.008, p=.931, ηp^2 =.0001), Physical Neglect ($F(1,44)$=.033, p=.856, ηp^2 =.001), Paternal Invalidation ($F(1,44)$=.991, p=.325 ηp^2 =.022), membership in a "perfect" family ($F(1,44)$=.069, p=.793 ηp^2 =.002) and "chaotic" family ($F(1,44)$=.031, p=.890, ηp^2 = .001).

Predictors of Compassionate Emotions

As above, none of the independent variables significantly predicted ratings of compassionate emotions following the CFI exercises. The results were as follows: Mood condition: ($F(1,42)$=.883, p=.353, ηp^2 = .021), General Imagery vividness ($F(1,42)$=.031, p=.862, ηp^2 = .001), Self-compassion ($F(1,42)$=.105, p=.748, ηp^2 =.002) Emotional Neglect ($F(1,42)$=.018, p=.894, ηp^2 =.0001), Physical Neglect ($F(1,42)$=.134, p=.716, ηp^2 =.003), Paternal Invalidation ($F(1,42)$=.023, p=.879 ηp^2 =.001), membership in a "perfect" family ($F(1,42)$=1.272, p=.266 ηp^2 =.029) and "chaotic" family ($F(1,42)$=1.783, p=.189, ηp^2 = .041).

HYPOTHESIS 7: Individuals with greater self-compassion and less ACES will be more likely to engage in CFI practice independently for one week.

At the initial testing sessions, nearly all of the participants agreed to be followed up after practising the compassionate imagery exercises at least twice a day for one week. Only 17 were retained at follow up. Of these participants, 88.2% were

female (N=15) and 11.8% were male (N=2), aged between 19 and 57 (m=34.25). In order to test the above hypothesis, an initial logistic regression was conducted to identify predictors of drop-out from completion of the follow up study. Self-compassion was added as a predictor a priori, then followed by the predictors that correlated with the CFI outcomes in the initial experimental session (general imagery vividness, emotional neglect, physical neglect, paternal invalidation, membership in a "perfect" family and "chaotic" family). Since the model was not statistically significant ($p = 0.421$), with self-compassion being the only significant predictor, another logistic regression was conducted, including self-compassion as the only predictor. The model was significant, χ^2 (1) = 10.558, p=0.001) and correctly classified 73.6% of all cases. Self-compassion explained 13.3% of the variance in predicting rates of drop-out and retention (B=0.863, p=0.034). Greater scores on the SCS measure (dropouts: m=24.69, sd=8.77 vs completers: m=19.30, sd=6.81) increased the likelihood of dropout from the study. The results therefore suggest that higher self-compassion predicted drop out.

HYPOTHESIS 8: Practising compassionate imagery exercises independently for one week will be associated with increased self-compassion.

Of all the participants who completed the follow up, 88.2% (N=15) practiced CFI imagery at least 5-6 times in the week (nearly every day). See Table 9 below for frequencies of practice.

Table 9: Frequencies of CFI practice among participants who completed follow-up.

CFI Follow up	Frequency *N*	Cumulative %
More than 2x daily	2	11.8
2x daily	8	58.8
once daily	2	70.6
5-6 times	3	88.2
3-4 times	1	94.1
1-2 times	1	100.0
Total *N*	**17**	

As predicted, a paired samples t-test revealed findings suggesting that participants who practiced CFI exercises at least 5 times in the week showed significant improvements in reported self-compassion ($t(14)=-3.484$, $p=0.004$) at the time of follow up ($m=23.8$, $sd=6.74$), compared to baseline ($m=18.94$, $sd=6.12$).

Qualitative data

Qualitative data collected from written comments and verbal discussions about the exercises (both during the experimental CFI task, at the end and at follow up) were transcribed, reviewed and entered into NVIVO software (QSR, 2000). Braun and Clarke's (2006) thematic analysis approach was employed, involving familiarisation with the data, generating initial codes, searching for, reviewing, defining and naming themes. Credibility checks (Elliot, Fischer & Rennie, 1999) involved a colleague auditing the different stages of the analysis, which included code and theme generation. If there were discrepancies, these were discussed and

final agreement was achieved. Key themes were developed jointly with the second researcher (Iona Naismith).

Themes that arose from the analyses were coded into four overarching categories: (1) Emotional Experiences that hindered CFI generation, (2) Thought processes that hindered CFI generation, (3) Mental barriers, and (4) Positive engagement with CFI exercises. See table 10 for a list of the 13 themes identified within these larger categories. See Appendix F for a detailed summary of these findings.

Table 10: Summary of themes derived from thematic analysis (*N*=53)

CATEGORY 1: Emotional experiences that hindered CFI generation
Anxiety and tension
The intrusion of distressing memories
Feelings of loss related to lack of compassionate experiences in one's life

CATEGORY 2: Thought processes that hindered CFI generation
Self-Critical thoughts
Mistrust of the compassionate 'other'
Perceived risks to wellbeing through engaging in CFI
Image perceived to be too unrealistic
Perceiving oneself to be undeserving of compassion

CATEGORY 3: Mental barriers
Distraction
Perceived Imagery ability

CATEGORY 4: Positive and therapeutic engagement with CFI exercises
Positive experiences of CFI
Imagery preference: human versus non-human images
Practical suggestions on improving engagement

CATEGORY 1: Emotional experiences that hindered CFI generation

Theme 1: Anxiety and tension

Many participants reported that they experienced anxiety and tension during the CFI exercises. Some people went on to explain that the anxiety they felt impacted

on their ability to concentrate on the task. Others described feeling "jittery" and conveyed a strong aversion to the "relaxed" state that they perceived the CFI exercises encouraged.

Theme 2: The intrusion of distressing memories

Some participants reported that engaging with the compassionate imagery was hindered by emotional distress triggered by memories of adverse experiences. A number of these intrusions involved painful memories of mistreatment, emotional abuse and neglect both from childhood and adulthood.

"…, I had many disturbing and dark memories from childhood mostly. But also from later life."(participant 30)

Even though the exercises brought up memories of adverse experiences for some individuals, a few reported that these distressing intrusions reduced as the experimental CFI task and experimental session progressed.

The experimental manipulation of mood involved picturing a memory of being criticised, and consequently many participants reported that they found it difficult to disregard the critical imagery, which intruded into the subsequent CFI task.

"After I immersed myself in this negative memory of an incident of emotional abuse from my childhood, I was no longer able to access the compassionate image I had created beforehand." (Participant 13)

However, there were a few participants who reported that they were better able to make use of the compassionate image after picturing a memory of being criticised. They reported being better able to utilise its soothing qualities when they

felt more distressed and more like it was "needed". It seemed that drawing on pre-existing coping mechanisms also helped to draw on compassion following the mood manipulation.

"I held onto a lot of my coping mechanisms, I thought of things that have worked for me to manage the memories of certain things, so I found that quite comforting…I've got a feral cat and when I am very down and depressed,… she comes and lies on me,… I didn't have to try and think "try and feel compassionate", I felt loved." (Participant 8)

Theme 3:Feelings of loss related to lack of compassionate experiences in one's life

Through the CFI task, some participants conveyed a sense of coming to the difficult realisation of having missed an important experience of compassion from others, particularly caregivers. This realisation triggered feelings of grief, loss, sadness, loneliness and emptiness for some people. These ideas were similar for participants who were asked to imagine a desired 'ideal' nurturer and those asked to imagine a compassionate 'other' from a past memory. In addition to loss, some participants also reported feeling rejected by people who withheld compassion, which triggered anger and sadness.

CATEGORY 2: Thought processes that hindered CFI generation

Theme 1: Self-Critical thoughts

Many participants reported that they found themselves engaging in self-critical thoughts that that hindered the generation of CFI. Some of the participants found themselves becoming frustrated because they were not "doing it perfectly" and one person said that not achieving a "perfect image" led to disengagement from the task. Other participants had concerns that they were somehow defective when they found it challenging to picture a compassionate 'other'.

Theme 2: Mistrust of the compassionate 'other'

Those participants who expressed feelings of mistrust in response to the compassionate 'other' seemed to be imagining a malevolent perpetrator with harmful intentions, rather than a caring nurturer. Some participants also reported that they chose to avoid the image by "shutting down" or "closing off" due to fears of being subjected to emotional hurt or pain. Alternatively, for a few people, trust seemed to grow with each subsequent CFI practice during the experimental session. Therefore, their response was the opposite; they felt safe and they welcomed the compassionate 'other'.

Theme 3: Perceived risks to wellbeing through engaging in CFI

Some participants described thinking that engagement with the CFI task would lead to uncontrollable changes to their mental wellbeing which led to different responses. For instance, one person described being fearful of triggering traumatic flashbacks of childhood abuse through "going inside [her] mind" which was felt to be too difficult to tolerate. Understandably, this led to deliberate avoidance of the compassionate imagery. Another participant, who persisted with the follow-up study described feeling under threat of psychotic symptoms returning due to the negative thoughts and feelings that were triggered whilst engaging in CFI. However, this participant seemed to be more able to tolerate their uncomfortable thoughts and feelings enough to persist with the CFI exercises.

Theme 4: Imagery perceived to be too unrealistic

Participants felt that even though they desired the compassion, the imagery did not match their reality given the lack of warmth, abuse and emotional neglect many of them have experienced. A few people even felt like the compassionate

image generated was cruelly mocking them and not actually offering them something genuine and reliable.

Theme 5: Perceiving oneself to be undeserving of compassion

Some participants described being aware of thoughts about not deserving compassion whilst they were engaging in the CFI exercises. One concern was about feeling like a burden to others who they believed would be drained through offering compassion to them. For some, this seemed to be because they perceived themselves to have too many problems. A few participants reported that they ruminated about past mistakes which made them feel guilty about desiring compassion from others. Others specifically talked about experiencing feelings of shame that accompanied thoughts of not deserving compassion.

CATEGORY 3: Mental Barriers

Theme 1: Distractions

Participants reported a range of distractions that precluded their concentration or grabbed their attention more strongly. Some of these things included noises in the room (e.g. clock ticking). Others reported that tiredness precluded their concentration and some commented on the repetitive nature of the imagery they were asked to create, which led to boredom and disengagement.

Theme 2: Perceived imagery ability

All participants were encouraged to use different senses to try and create their compassionate figure and that they should expect fleeting impressions. Even given these instructions, many participants focussed on difficulties that they experienced with creating a clear image. Some participants who described having a vivid imagination or experience with meditation appeared to be better able to get a

clearer image of the compassionate figure. These individuals tended to be better able to 'hold' the image for longer and draw comfort from it.

CATEGORY 4: Positive and therapeutic engagement with CFI exercises

Theme 1: Positive experiences of CFI

Participants that were able to develop impressions of a compassionate and caring 'other' reported feeling warm, happy, peaceful, calm and refreshed. Even though many participants reported that they struggled to generate compassionate imagery as a result of difficult past experiences in relationships, some were pleasantly surprised to (re)discover memories of compassion from others. Amongst those who completed the follow up, there were individuals who found practicing the compassionate imagery throughout the week helpful. Some even increased practice to more than the suggested frequency (twice a day). These people reported that practicing CFI helped them to regulate difficult emotions they experienced.

Theme 2: Imagery preference: human versus non-human images

Some participants expressed a specific preference for non-human imagery (e.g. an animal) or inanimate objects (e.g. grandfather's boat). A few people explained that this was because imagining a compassionate person was either too threatening or unrealistic based on their past experiences. For participant's who decided to create a compassionate image based on people known to them, there was a tendency to picture examples of healthier relationships (e.g. a current loving partner) and accepting imperfections.

Theme 3: Practical suggestions on improving engagement

When the groups were asked what they would suggest in order to help improve the experience and engagement with the CFI, a number of participants

suggested including multisensory elements. (e.g. soft toys, blankets or a picture of a baby). Some people felt that practicing the exercises within a group was less isolating whilst others felt more unsafe within a group. Those who persisted with the exercises for a week indicated that they would have benefited more from practicing CFI with greater support to manage difficult intrusions that were triggered.

DISCUSSION

The impact of negative affect states on compassionate imagery generation in Personality Disorders.

The association between greater negative mood and poorer performance across CFI outcomes partially supported Hypothesis 1 (which stated that negative mood and lower positive mood will be associated with poorer outcomes in CFI generation). Overall, positive mood which is linked to enthusiasm and activation (Tarlow and Haaga, 1996) was not significantly associated with CFI outcomes in this study. These findings suggest that engagement with CFI exercises may be more sensitive to negative affect states which are associated with depression, pessimism, withdrawal, and anxiety (Tarlow and Haaga, 1996). This interpretation of these quantitative findings is further supported by the qualitative results which suggested that difficulties engaging with CFI were linked to feelings of anxiety and tension, believing oneself to be unworthy and undeserving of compassion as well as engaging with self-critical thoughts. These findings also support previous qualitative research conducted by Lawrence and Lee (2013) which found similar "barriers" to engaging with compassion-focussed approaches.

Even though negative affect was associated with poorer performance on CFI outcomes across both mood conditions, Hypothesis 2 (stating that mood manipulation would worsen generation of compassionate imagery) was not

supported. Despite the success of the experimental manipulation of mood, the increase in negative affect did not significantly change ratings of compassionate qualities, emotions nor imagery vividness. Upon closely examining the changes in CFI outcome scores from pre to post-mood manipulation for individual participants, it appeared that whilst some participants showed a decline in performance, others showed an improvement. Qualitative data helped to explain these differences in performance across the conditions. Some individuals reported that after mood manipulation, they felt less able to focus on compassion, instead they felt more preoccupied with the "critical" image (used in the mood manipulation) and the negative emotions that it triggered. This finding is consistent with Linehan's (1993) biosocial model that suggests that individuals with BPD show high reactivity to negative emotional stimuli as well as difficulties turning their attention away from it. On the other hand, some individuals reported feeling as though their ability to draw on care and kindness from a compassionate "other" was enhanced when they felt more distressed.

These mixed findings are also consistent with previous qualitative research conducted by Pauly and McPherson (2010). Their sample consisted of individuals diagnosed with anxiety and depression who were interviewed about their experiences and meanings of self-compassion. Participants in their study reported that having compassion for themselves was useful in relation to managing their psychological difficulties. However, participants also reflected that feeling anxious or low in mood negatively impacted on their ability to engage with self-compassion.

The link between self-compassion and ACES in Personality Disorders

Partially in line with the study's predictions (Hypothesis 3; Individuals with lower self-compassion will report more ACES) and findings from previous research

(e.g. Tanaka et al. 2011; Vettese, Dyer, Li, Wekerle, 2011), self-compassion was significantly associated with some of the measures of childhood maltreatment. In particular, lower self-compassion was more strongly associated with reduced early memories of warmth and high ratings for membership in an invalidating "perfect" family. It is important to note that self-compassion was not significantly associated with several measures of childhood maltreatment. This included most of the subscales on the CTQ (emotional abuse and neglect, sexual abuse and physical abuse), and most of the subscales on the ICES (maternal and paternal invalidation, membership in a "chaotic" and "typical" family). These findings suggest that the severity of a range of ACEs may not directly affect levels of self-compassion in adults diagnosed with a Personality Disorder.

The role of pre-existing self-compassion in predicting engagement with CFI generation in individuals with Personality Disorders.

Contrary to the study's prediction in Hypothesis 4 (stating that individuals with lower self-compassion will have a reduced ability in generating compassionate imagery.), pre-existing levels of self-compassion were not significantly associated with any of the CFI outcomes. This finding differs from previous research by Rockliff et al. (2011) who found that lower self-reassurance was associated with poorer performance on compassionate imagery tasks in healthy participants. However, previous studies have also examined related constructs that include measures of social safeness (perceived care and warmth from others and enjoyment of close relationships) and self-criticism. When these measures were used they were found to be strongly associated with poor performance on compassionate imagery tasks (Rockliff, Gilbert, McEwan, Lightman & Glover 2008; Rockcliff et al. 2011).

Nevertheless, the study showed the impact of pre-existing levels of self-compassion on drop-out rates from the study. Unexpectedly, higher levels of self-compassion were associated with greater rates of drop-out from the follow-up and individuals with less self-compassion were retained. Markus and Nurius (1986) suggested that the motivation to act on change is determined by the need to reduce the discrepancy between the actual and hoped-for self. The findings from this study may be interpreted as being demonstrative of increased awareness of very low self-compassion which may have motivated further engagement with CFI exercises in a proportion of participants. Previous studies have also found that individuals who identify themselves as self-critical tend to put themselves forward to participate in CFT interventions (e.g. Gilbert & Irons, 2004; Gilbert & Proctor, 2006).

The impact of adverse childhood experiences (ACES) on generation and engagement with CFI in Personality Disorders

In addition to the measure of self-compassion (SCS), the severity of ACES (measured by the ICES, EMWS and CTQ) did not predict CFI outcomes markedly. In an uncorrected Pearson's correlation, higher Emotional Neglect was associated with reduced ratings of CFI qualities before the mood manipulation and Compassionate Emotions after mood manipulation. This finding is interpreted tentatively, due to the multiple comparisons that were conducted and the non-significance of this variable when a further RMANCOVA was conducted to test Hypothesis 6. Nevertheless, the finding might be indicative of similar trends in previous research and theory that suggests that emotional neglect may be associated with difficulties with experiencing self-compassion (Germer & Neff, 2013).

After the mood manipulation, lower scores for experiences of

Compassionate Emotions were associated with higher scores for paternal invalidation, membership in a "chaotic" and "perfect" family, as well as greater emotional and physical neglect. These findings are interpreted with caution as they were derived from an uncorrected Pearson's correlation, with the above measures of ACEs having demonstrated non-significance in the subsequent RMANCOVA. The results showed that the severity of ACEs did not predict Compassionate Emotions across both mood conditions when self-compassion and general imagery vividness were added to the RMANCOVA model. Nevertheless, the correlational findings from the Pearson's test may suggest that in the presence of greater negative emotional arousal, those with higher ACEs may experience increased difficulties with accessing compassionate emotions.

The qualitative findings from this study showed that for some participants, engaging with compassionate imagery triggered intrusive memories of childhood trauma and abuse. Experiencing such memories negatively impacted people's experience of CFI due to the difficult thoughts and emotions that precluded engagement. The findings also support observations by Gilbert (2009; 2010) suggesting that individuals with histories of maltreatment can easily identify maladaptive thoughts that are derived from a lack of warmth and care in childhood (e.g. "I'm unlovable") which limit access to self-compassion.

For some participants in this study, reminders of abusive early relationships through engagement with an ideal nurturer (Lee, 2005) also triggered feelings of grief and loss in response to the care that was perceived to have been "missed". Some participants also reported that they felt angry in response to perceived rejections in the past.

It is important to note that the qualitative data highlighted difficulties with

intrusive early memories of trauma for only a proportion of participants. Therefore the link between ACES and CFI outcomes may be affected by other intervening factors. Previous research suggests that it is the relational consequences of those early traumas (e.g. attachment style), that may be more strongly related to performance on compassionate imagery tasks (e.g. Rockliff, et al. 2011). Insecure attachment styles (associated with childhood maltreatment or invalidation) can change with time through experiences in later reparative relationships (e.g. Travis, Bliwise, Binder & Horne-Moyer, 2001). It is possible that those with more salient experiences of acceptance, warmth and care in later life may have been better able to draw on these experiences during CFI generation.

Additionally, since adults with Personality Disorders represent a group of individuals who have long-standing histories of mental health service use (Lieb et al. 2004), it is likely that they will have previously had opportunities to discuss their past early traumas. Trauma-focussed therapeutic approaches aim to reduce distress by talking through or reliving the traumatic experiences in order to 'process' them through reappraising the events in a more adaptive way (e.g. "it was not my fault") (Lee, 2009; Cohen, Mannarino, Kliethermes, Murray, 2012). The negative quantitative results might reflect that it may not be the severity of ACES that impact on CFI outcomes. Instead, it may be whether the early traumas have been processed which makes them less intrusive, distressing and also easier to manage (Kar, 2011). This interpretation might also be applied to the link between self-compassion and the severity of ACES amongst individuals with Personality Disorders. It may be that if traumas are no longer as problematic or unmanageable, they are less likely to negatively impact on experiences of self-compassion (e.g. Beaumont, Galpin, & Jenkins, 2012). Qualitative findings from this study also supported this as a few

participants explained that they were able to tolerate and manage intrusive memories of ACEs using existing emotional coping strategies. These coping abilities therefore allowed them to successfully engage with CFI.

The impact of general imagery ability and CFI generation

The current study also showed that greater vividness of general imagery was associated with better CFI outcomes. The correlational findings were also supported by the qualitative data. Those who have had more experiences of imagery generation (e.g. through meditation) or more vivid imaginations reported clearer and more detailed CFI. Aleman, Bocker and de Haan (1999) suggest that higher the imagery vividness, the closer the experience will be to an actual sensory perception. This suggests that individuals who find it easier to generate general mental imagery may be more likely to engage more easily with the CFI component of compassion-focussed therapies.

Fears of engaging in CFI

Though this study did not directly investigate the link between fears of compassion and compassionate imagery ability, some of the participants' qualitative responses reflected ideas relating to feeling threatened by compassion (e.g. via mistrust) and having a desire to reject it. These findings are similar to previous studies which have obtained feedback on compassion-focussed tasks from participants who have experienced trauma and have a longstanding history of complex mental health problems (e.g. Gilbert & Irons, 2004; Lawrence and Lee, 2013). The aversive experience associated with compassion directed to the self is also in line with neurophysiological research suggesting that self-compassion can activate the amygdala, which signals threat in the brain (Longe et al., 2010).

Individuals with Personality Disorders have been found to show greater amygdala reactivity than healthy control subjects even in the face of neutral stimuli (e.g. Donegan, et al., 2003). Therefore, it is logical to expect that their threat responses are more intuitive when faced with imagery that expects one to be trusting and welcoming of the compassionate "other".

Participants also reported their fears of triggering intolerable emotional dysregulation through participating in the CFI exercises. The resultant numbing strategies (e.g. "shutting down" or "closing off") were consistent with the experiential avoidance common in individuals with BPD (Chapman, Specht & Cellucci, 2005). Previous research has also found that individuals with BPD also have a tendency to withdraw from social support and use avoidance or escape to cope with a stressor (e.g. Bijttebier & Vertommen, 1999). This suggests that in Personality Disorders, avoidance of negative emotions may be a much easier coping strategy than attempting to seek support from a compassionate 'other' who may be viewed as a threat.

Similar to findings in research by Gilbert and Proctor (2006), some participants in the current study elaborated on increased safety with non-human imagery (e.g. animals, a path) due to previous negative experiences in human relationships. These findings suggest that the capacity to engage successfully with compassionate imagery in individuals with Personality Disorders may also be dependent on the type of imagery that they are encouraged to generate.

Positive engagement with CFI in Personality Disorders

Despite the difficulties individuals experienced with generating compassionate imagery and the rate of drop-out from the follow-up, the current study

also demonstrated evidence of positive engagement with CFI. This was reflected in high (or increasing) scores for CFI outcomes for some participants as well as positive qualitative feedback. Previous research also reports mixed experiences with compassion within groups of individuals who have emotional disorders (Gilbert & Irons, 2004; Gilbert & Proctor, 2006; Pauly and McPherson, 2010; Lawrence & Lee, 2013). In this study, some individuals reported that their experiences of CFI helped them regulate difficult emotions, both within the initial study and during follow-up. Encouragingly, amongst those who participated in regular CFI practice for one week, there was an improvement in ratings of self-compassion, which is in line with previous research.

Limitations of the study

This study had several limitations. Firstly, despite the sample size meeting the requirements of the initial power calculation based on bivariate correlations conducted by Tanaka et al. (2011), the current study was still underpowered, particularly when more complex analyses were introduced. In addition, since there was a high volume of drop-out from the one week follow-up, there was little power to detect a broad range of effects. In anticipation of this, attempts were made to recruit more participants to the study. Even though interest was shown by a larger number than recruited, less people actually attended the experimental group sessions they were invited to. Since non-significant correlational data was in the expected direction, it is possible that an increased number of participants (both during the experiment and at follow-up) would have made the study sufficiently powerful enough to detect stronger effects of predictor variables (e.g. emotional and physical neglect) on CFI outcomes.

The study also did not include a reasonably balanced number of males and females (17% vs 83% respectively). This meant that gender differences in engagement with CFI could not be adequately investigated using statistical approaches. Therefore, it remains unknown whether the CFI component of compassion-focussed approaches may be more difficult for males or females diagnosed with a Personality Disorder.

The CFI exercises used in the current study may also have been subject to practice or familiarity effects since participants had an opportunity to practice the compassionate imagery during a practice round as well as before and after mood manipulation. The cumulative practising could have naturally improved imagery generation which may have resulted in what appears to be no change in CFI outcomes across both mood conditions.

Another limitation of the study was that the experimental groups consisted of a varied number of group members (ranging from one to twelve people). Since most participants had never met, group size may have impacted on anxiety levels and feelings of safety amongst the participants.

In line with Linehan's (1993) ideas about difficulties with labelling emotions in BPD, it is possible that participants may have struggled to give accurate ratings of their emotions. This is because this study only relied on self-report relating to mood and experiences of CFI, rather than also including objective physiological measures. For instance, Rockliff et al. (2008) included measures of heart rate variability and salivary cortisol in order to objectively investigate stress responses to CFI.

In addition, the measures of ACEs were also reliant on self-report. Therefore, participants may have under-reported their experiences of ACEs (e.g.

experiences of childhood sexual abuse) which is a common phenomenon amongst victims of childhood abuse (Fergusson, Horwood, Woodward, 2000).

The current study did not use a measure of positive affect that was more related to affiliative states which are more relevant to engagement with a compassionate 'other'. For example, the positive component of the PANAS measures mood outcomes relating to states such as "alert", "enthusiastic", "determined" and "interested", which are more related to the drive system and not the soothing emotional regulation system. Using the Types of Positive Affect Scale (TPAS; Gilbert et al., 2008) which includes measures of "secure" "safe" "warm" and "content" states would have been more relevant to the CFI outcomes.

Finally, whilst the current study benefited from additional qualitative data, it is important to note that this data was supplementary. The data obtained from discussions about experiences of CFI was based on a limited number of questions rather than a comprehensive or detailed interview schedule. Therefore, the qualitative findings can only be considered to be preliminary at this stage.

Implications for Future Research

It is recommended that the limitations of this investigation be addressed in future research studies. This includes increasing sample size, recruiting more male participants as well as including physiological measures of stress responses in response to CFI. Since the main part of this investigation was experimental, the follow-up was not extended over a longer period of time. Therefore, future studies should employ a longer follow-up period that also assesses changes in self-compassion as well as mental health outcomes such as depression, anxiety and suicidality. This would be in line with previous research has that has investigated the

link between compassion-focussed therapeutic approaches and reduced psychological distress levels in participants with severe and complex mental health problems (Braehler et al. 2012; Lucre & Corten, 2013).

Future studies should also consider the potentially unexamined variables that might mediate the relationships between self-compassion, ACES and CFI outcomes. This includes considering using the measure of fears of compassion (FCS; Gilbert, McEwan, Matos, Rivis, 2011), which not only includes a measure of fear of self-compassion, but also fears of compassion from others and fears of expressing compassion to others. These subscales might yield different results in their relationship to the ability to imagine a compassionate 'other' extending unconditional warmth and kindness to the self. Future studies should also strongly consider including measures of experiential avoidance which might impact on levels of engagement with CFI. In addition, a standardised clinician administered measure of PTSD symptoms (e.g. Clinician-Administered PTSD Scale for DSM-IV, CAPS; Blake et al. 1995) should be included in future investigations. A measure of this nature would capture experiences of ongoing trauma-related symptoms whilst eliminating self-report bias. In addition to including a measure of adult attachment (e.g. Adult Attachment Interview, AAI; George, Kaplan & Main, 1985) using the CAPS would allow for a more reliable and valid investigation of the relationship between consequences of trauma and difficulties with generating CFI.

Finally, this study did not specify whether the participants should imagine a person, animal, place or the self in either the compassionate "ideal" or compassionate figure from "a memory" imagery conditions. Future experimental studies might strictly control for what participants imagine in order to investigate the impact on CFI outcomes.

Clinical Implications

Assisting individuals with a Personality Disorder to develop skills that enhance self-compassion is an important therapeutic aim given the detrimental effects of high emotional dysregulation within this population. However, in helping them to build compassion-focussed strategies such as CFI practice, it will be vital to consider the impact of early traumatic experiences, particularly for those who may present with trauma-related symptoms (e.g dissociation, avoidance, re-experiencing and hyperarousal).

Standard CFT sessions often include psychoeducation about self-criticism and the emotional regulation systems of the brain (e.g Gilbert & Irons, 2004; Lucre & Corten, 2013). In addition to this information, clients with Personality Disorders should also be offered psychoeducation relating specifically to the way in which early experiences can result in difficulties with accessing compassion. In particular, clients may benefit from understanding that feelings of loss, sadness, anger and fear may also arise. In the context of this psychoeducation, clients would then be aware of the natural responses that may arise, given their early experiences. Alongside their therapist, this understanding might allow them to pace their engagement with compassion-focussed approaches according to their needs and readiness. This means that an initial assessment process of eligibility for CFT interventions should also include exploration of early traumatic experiences and their impact in the here and now. It may be that some participants may be better suited to individual rather group compassion-focussed therapy depending on the outcomes of an initial assessment.

Another important aspect of supporting individuals who may struggle more with creating a mental image is to include multi-sensory elements to enhance the

experience of generating compassionate emotions through CFI. Participants in this study suggested the use of soft toys, music and soothing smells in order to enhance the compassionate sensory experience, particularly for those who struggled to hold a mental image.

Finally, due to the high regularity of emotional dysregulation within this clinical population, clients may benefit from being encouraged to practice CFI initially in the presence of lower negative emotional arousal. It may also be beneficial to develop smart device applications (suitable for e.g. smart phones, tablets) that include guided audio-visual instructions to generate CFI 'on the go'. This technology may be easier to engage with as it relies less on one's ability to try and remember a written script or previously practiced image when highly distressed.

Summary and Conclusion

The current study revealed that optimal engagement with compassionate imagery might be reliant on a broad range of complex factors in different individuals diagnosed with Personality Disorders. For some individuals, compassionate imagery was viewed as a helpful way to cope with difficult emotions, whilst others felt that the image is too difficult to access in the presence of difficult emotions. The quantitative and qualitative results revealed that the main factors that were related to CFI outcomes included general imagery vividness, negative mood and the negative psychological impact of ACEs which included intrusive memories of childhood trauma as well as feelings of loss and rejection. Higher self-compassion reliably predicted greater dis-engagement from the one-week follow up after practicing CFI regularly for one week. There was an improvement in self-rated self-compassion after one week of practice.

Compassion-focused interventions that include regular CFI practice might

be effective in managing psychological distress for some individuals diagnosed with a personality disorder. It will be important for clinicians and future researchers in the area to determine whether the consequences of early trauma might be a barrier to engagement with standard forms of compassion-focussed therapies. Tailored adaptations to compassion-focussed therapies should be considered within this clinical population.

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Part Three: Critical Appraisal

Introduction

This critical appraisal provides a reflection on the process of conducting the present research. I will reflect on my experiences of working on a joint research thesis, issues regarding recruitment for the study, and aspects of the methodology that was used. In addition, I also highlight the limitations of my role as a researcher in an experimental study. Finally, I highlight the emotional impact of the research on myself and how this shaped my hopes and suggestions for future work with individuals who have been diagnosed with a personality disorder.

Conducting a joint research thesis

The empirical study was conducted as a part of a joint research project with another trainee clinical psychologist, Iona Naismith. The collaborative nature of team-based research practices provides many benefits to the process (Mouthner & Doucet, 2008). Fox and Faver (1984, p.349) highlight the utility of working as a team, as opposed to conducting research as a lone researcher:

> "The separation of tasks and the joining of specialisations may enable collaborators to increase their efficiency and enhance the overall quality of their work since groups of persons may be able to handle research problems faster and more easily than single scientists."

The experience of working alongside another colleague provided opportunities for a variety of ideas to be generated and appraised before final decisions were made on issues such as study design, methodology, and themes derived from qualitative data. This means that our decisions were based on reflexive processes that required us to question and justify our approaches to the research, whilst also being able to negotiate in areas where our ideas or priorities differed (e.g.

choosing questionnaire measures that were essential for our joint and individual objectives).

As the research process progressed, I grew to value the efficiency that our small "team" provided. For example, having both of us working on the application for ethical approval, running experimental groups, scoring questionnaires as well as transcribing and inputting data helped us to manage the large workload involved in conducting this research. Joint working also taught me the value of fostering positive and supportive working relationships in research. Sharing our experiences of challenges and frustrations throughout the research process helped us to feel less isolated and overwhelmed, whilst also promoting a stance of compassion for ourselves and each-other.

Recruitment for the study

During the process of assessing the feasibility of this study to be completed as part of the requirements of the D.Clin.Psy programme, the issue of recruitment was a highly prioritised consideration. Given the common challenges of recruiting clinical populations to research (Patel, Doku & Tennakoon, 2003), it was imperative to develop strategies that maximised the recruitment, engagement and retention of participants (for follow-up). In line with suggestions made by Patel et al. (2003), the following strategies that were employed in this study included: Regular e-mail communication and presentations with clinicians (the referrers); displaying posters in mental health facilities (e.g. group rooms); incorporating small financial incentives (£10 vouchers); alternative incentives (e.g. providing food and emphasising the valuable role that interested participants are playing in supporting the development of therapeutic interventions); telephone contact and reminders to attend agreed study sessions; and regular text or e-mail reminders to practise the exercises.

Despite the consistent use of these strategies, the challenges of recruiting and retaining a larger sample of participants became more apparent as the study progressed. The first study group conducted expected up to seven participants, however, yet only four people were present. There were also subsequent occasions where only one participant attended a session where more were expected.

Previous research has found that it is harder to recruit individuals who perceive a higher level of inconvenience through participation in research (e.g. Hayman, Taylor, Peart, Galland & Sayers, 2001; Patel et al., 2003). Though participants' travel costs were covered by the project's funding, a number of participants reported that they preferred a study venue that was closer to their workplace or home. Even though efforts were made to vary study locations to suit a greater variety of people within the North East London area, the available locations and dates did not always match with participants' plans and priorities (e.g. some people were only available on days when the study was located further away).

Other studies have found that altruistic motives are predictive of study participation (e.g. Gysels, Shipman & Higginson, 2008). In the current study, though participants were informed of their contribution to therapy developments, the highly emotive nature of engaging with compassion may have been a more salient competing factor, leading to non-engagement or disengagement.

The use of supplementary qualitative data in quantitative research

Given the heterogeneous individual differences inherent in groups of people with a diagnosis of a Personality Disorder, it was important to obtain qualitative data alongside the quantitative measures used to test the hypotheses of this study. Denscombe (2008) outlined the advantages of using mixed methods in research. These included, (a) improved accuracy of results, (b) constructing a more

comprehensive understanding of study phenomena, (c) minimising the biases and limitations inherent in single-method approaches whilst capitalising on the strengths of each approach (quantitative and qualitative), and (d) building on the initial results.

The present study benefited from the advantages outlined above. The weak or negative quantitative results appeared to be accounted for by information that was subsequently obtained through verbal or written feedback about engagement with CFI. Using both methods in the same study highlighted the diversity and complexity in experiences of CFI among different individuals with personality disorders. Whilst the questionnaire measures provided scores that were calculated without bias and with accuracy, the qualitative results provided detailed explanations of specific obstacles as well as positive skills that impacted on engagement with CFI.

As discussed in the Empirical Paper, the qualitative results were only supplementary and therefore can only be considered to be preliminary at this stage. Leech, Dellinger, Brannagan and Tanaka (2010) emphasise the need to assess strengths of a mixed methods approach, using criteria that allows for the evaluation of inferences made from both types of data (qualitative and quantitative). Amongst the key elements for evaluating studies using mixed methods, Leech et al (2010) suggest that agreement and consistency in the data interpretation should be apparent. In order to assess the presence of these elements more fully, it would be necessary to replicate this study with a more detailed interview schedule assessing the lived experiences of individuals with personality disorders who have attempted CFI.

Participating in this research has also enhanced my appreciation of the unique voices of each participant and the different experiences that have led them to their psychological challenges and triumphs in the "here and now". The future use of detailed analytic approaches such as Interpretive Phenomenological Analysis (IPA)

with a smaller sample might lend itself to providing much richer qualitative data in CFI research. This is because IPA is concerned with providing a detailed examination of the way each participant makes sense of their internal and external experiences (Finlay, 2011). The process also more explicitly involves the dynamic examination of the researchers' own efforts in making sense of the participants' attempts to understand their experiences. This process can be likened to the approach of psychological therapists who are skilled in self-reflection and reflexivity in their work with clients (Finlay, 2011).

My role as a clinician and researcher

My role as a developing clinician and researcher, helped me to recognise the benefits of possessing both skill sets throughout the research process. The complimentary combination of clinical skills included being able to convey care and empathy, awareness of a variety of emotional regulation strategies if individuals became distressed (e.g. distraction, advice on seeking emotional support) as well as risk assessment and management skills if they were required during the study.

Despite possessing the above-mentioned skills, running a one-off experimental group with participants may have limited the scope of the findings, particularly given the improvements in self-compassion after one week of CFI practice. The Scientist-Practitioner model encourages psychologists to conduct research that reflects the current clinical work that they are practicing (Stricker, 2002). My role as a researcher in this experimental study did not allow for the observation of change and progress over time, in the same way that treating clinicians would (e.g. Gilbert and Irons, 2004; Lucre & Corten, 2013). Nevertheless, the main goal of this study was to identify the barriers to engaging with CFI in personality disorders, which could inform adaptations to future practice-based

treatment studies.

Emotional responses

In preparation for the study's data collection, my colleague Iona Naismith and I anticipated the psychological distress that might be triggered in participants. In the ethical considerations of the study, it was particularly important to thoughtfully appraise the value of including a mood manipulation task as well as including measures of adverse childhood experiences. Our decision was based on findings from previous research that suggested the role of mood and adverse childhood experiences in hindering experiences of self-compassion (e.g. Pauly & McPherson 2010; Tanaka, Wekerle, Schmuck, & Paglia-Boak, 2011). Additionally, we considered our involvement with this research to be in-line with the priorities of health authorities seeking to deliver effective evidence-based treatments (McHugh & Barlow, 2010). Therefore, the decision to include potentially distressing material was essential in order to contribute to well-researched developments and adaptations to compassion-focussed therapies for individuals with personality disorders.

In order to manage the distress that the tasks brought up, participants were debriefed about their experiences and various distraction activities were offered. We made it clear to participants that their participation was voluntary. They were also advised to discuss any concerns about the study with their treating clinician, if they were unable to discuss them with myself or Iona Naismith.

As is common in research (Corbin & Morse, 2003; Grinyer, 2004), this study placed emphasis on the ethical considerations and management of negative emotional reactions of participants. However, Malacrida (2007) highlights the uncommon acknowledgement of the researchers' own responses to emotional material derived from the study process and data. I was not expecting to experience a

strong sense of sadness and unease through my experiences with different aspects of the data gathering process.

The process of scoring questionnaires revealed participants' early experiences of lack of warmth, parental invalidation, emotional and physical neglect as well as the horrors of sexual, emotional and physical abuse. A number of participants reported experiences of multiple types of maltreatment. These findings were not unexpected given the large body of research reporting an association between childhood maltreatment and the development of personality disorders. However having met and engaged with participants face to face, the statistics became more of an alarming reality to me. In addition, group discussions (within the study sessions and again whilst transcribing data) addressing the barriers to engaging with CFI were very poignant. In particular, I was moved by conversations about participants' experiences of grief and loss in relation to a lack of consistent experiences of care, protection, warmth and compassion. As a result of those emotive moments, my commitment to this project deepened.

The emotional distance of the researcher in relation to participants has long been perceived to be a healthy mechanism to protect one's wellbeing with the belief that building knowledge is best accomplished through more rational and unemotional means (Wheatly, 2005; Malacrida, 2007). However, Jagger (1992) suggested an alternative view, and one that I also agree with. Jagger (1992) stated that research motivated by an emotional connection and values that include care and compassion, has the potential to bring about substantial positive and "liberating" changes to the body of knowledge. My strong emotional reactions to this work helped me to think about ways in which "liberation" might take place as research and clinical innovations progress. The next section therefore highlights the importance of

developing genuine compassion that is fostered through a thorough understanding of the origins of distress experienced by individuals diagnosed with a personality disorder.

A compassion-focussed approach to working with individuals diagnosed with personality disorders.

The process of planning and executing this thesis has called for reflection on the importance of recognising the role that traumatic experiences play in perpetuating psychological distress, whilst capacities for self-compassion are also hampered. This research has largely focussed on illustrating the importance of helping individuals with personality disorders to develop compassion for themselves so that they are better equipped to manage their own distress. However, what is also highly important is for clinicians and researchers to also endeavour to extend genuine and consistent compassion in their work with this clinical population.

The stigma associated with personality disorders has been put forward as a significant barrier to extending compassion and understanding towards individuals in this clinical population (Aviram, Brodsky & Stanley, 2006). As individuals with a personality disorder frequently present in services with highly intense and powerful emotions, there is a tendency for clinicians to be strongly impacted by these experiences. Clinicians often perceive patient presentations as intrusive or manipulative in nature (Aviram et al., 2006). Goffman (1963) suggests that individuals who are stigmatised are often discounted and discredited. Such discounting and discrediting practices are evident in relationships between mental health workers and individuals with personality disorders. For example, in order to cope with the demands that patients present with, mental health workers may "retreat emotionally" (Hinshelwood, 1999). This attitude has reportedly resulted in patients

with personality disorders being viewed as "annoying", "attention-seeking" and "undeserving" of the mental health resources offered to them (Lewis & Appleby, 1988). As a consequence of this stigma and emotional distancing from mental health workers, people with personality disorders may feel that their fears of rejection and unworthiness have been confirmed. This perceived confirmation inadvertently triggers self-loathing and risky impulsive behaviour. The demands this behaviour engenders then perpetuates strong negative emotions and further emotional distancing by mental health staff (Aviram, et al., 2006).

In order to address the vicious cycle outlined above, it is important that the negative stigma attached to individuals with a personality disorder is addressed and reduced. Recent studies have employed the use of psycho-educational workshops for health care providers to improve behavioural intentions and attitudes towards individuals with this diagnosis (e.g. Knaak, Szeto, Fitch, Modgill, Patten, 2015). In the study by Knaak et al. (2015) health care workers were provided with skills training to enable them to effectively support and interact with patients with personality disorders. Additionally, the intervention involved challenging common misconceptions through education and interaction with an individual with a lived experience during the workshop sessions. The findings of the study showed that the degree of stigma reduced over time.

Though the abovementioned findings are encouraging, the degree of baseline stigma associated with personality disorders was higher than that of other mental disorders (Knaak, et al., 2015). Earlier studies have consistently found this result (Fraser & Gallop, 1993; Markham & Trower, 2003; Forsyth, 2007). My experiences of conducting this research has directed me to revisit the conceptualisation of personality disorder in comparison to "complex trauma"

(initially outlined in the Introduction section) and the implications for research and clinical practice.

Incidents of early childhood abuse and trauma have been found to be associated with individuals being at least four times more likely to develop a personality disorder than those without these experiences (Johnson, Cohen, Brown, Smailes & Bernstein, 1999). In particular, childhood physical and sexual abuse as well as childhood neglect have been associated with elevated levels of symptoms of personality disorder in early adulthood (Johnson, et al., 1999). Interestingly, van der Kolk, Roth, Pelcovitz, Sunday and Spinazzola (2005) identify the aetiology of "disorders of extreme stress" and "complex adaptation to trauma" which overlaps with aetiological factors associated with "personality disorders". These shared early predisposing factors were reported to include histories of childhood physical and sexual abuse over prolonged periods of time. Van der Kolk et al., (2005) found that individuals with a higher proportion of these experiences also presented with problems in the areas of emotional regulation, self-perception, maintaining stable interpersonal relationships, and somatic difficulties. The clear overlap between the symptoms and aetiological factors of complex trauma and personality disorder suggests that the two conditions may be indistinguishable.

Knefel, Tran and Lueger-Schuster (2016) argue that mental "disorders" do not have clear boundaries and should not be considered to be discrete entities. Given the overlap that personality disorder has with "disorders of extreme stress" or "complex trauma" using trauma-focussed terminology to describe the condition might be more useful and less stigmatising. The current thesis focussed on building capacities for compassion, which develop from healthy relationships with the self and others, thus it may be useful for clinicians health care workers and researchers to

consistently use language that moves away from blaming narratives to more compassionate ones. As a result of shifting to a more compassionate stance towards this clinical population, long-standing patterns of behaviour and difficulty can be understood in light of previous trauma. In addition, a compassionate stance would allow mental health workers to become more attuned to interactions that patients can experience as re-traumatising (e.g. via perceived rejections leading to self-loathing and self-harm).

In addition to implementing psychoeducation workshops focussing on skills development and challenging negative assumptions (Knaak, et al., 2015), this research project also highlighted the need for more time to be made to thoughtfully and compassionately formulate patients' difficulties taking into consideration their early history. Such dedicated time would be particularly important, but pragmatically very difficult due to increasing time demands, for health care workers in highly stressful and emotive work environments. One role for clinical psychology in the evolving need for all mental health practitioners to work more compassionately, will be to teach and supervise the skills of formulation to a wider range of health professionals.

Conclusion

This study aimed to explore the barriers to engaging with compassionate imagery in individuals diagnosed with personality disorders. One of the main research questions concerned the influence of adverse childhood experiences on engagement with compassionate imagery. This critical appraisal highlighted the emotional challenges that were involved in the data collection and analysis process. After considering the multiple adverse experiences in early relationships described by participants, this directed me to consider the need to challenge the negative stigma

that still exists amongst health care providers in relation to people diagnosed with a personality disorder. It is important for clinicians and future researchers to reshape the narratives, attitudes and terminology that perpetuates blame and emotional distancing which leads to sustained or increased distress (Aviram, et al., 2006).

Overall, despite the study's limitations, the research is a valuable addition to the body of research in compassion-focussed therapy for people with histories of early trauma presenting with severe, and enduring mental health difficulties.

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APPENDICES A-F

Appendix A1

"Checklist for assessing the quality of quantitative studies" from Kmet et al. 2004

Criterion number	Criterion	Yes (2), Partial (1), No (0), N/A
1	Question / objective sufficiently described?	
2	Study design evident and appropriate?	
3	Method of subject/comparison group selection *or* source of information/input variables described and appropriate?	
4	Subject (and comparison group, if applicable) characteristics sufficiently described?	
5	If interventional and random allocation was possible, was it described?	
6	If interventional and blinding of investigators was possible, was it reported?	
7	If interventional and blinding of subjects was possible, was it reported?	
8	Outcome and (if applicable) exposure measure(s) well defined and robust to measurement / misclassification bias? Means of assessment reported?	
9	Sample size appropriate?	
10	Analytic methods described/justified and appropriate?	
11	Some estimate of variance is reported for the main results?	
12	Controlled for confounding?	
13	Results reported in sufficient detail?	
14	Conclusions supported by the results?	

Items not applicable to a particular study design were marked "n/a" and were excluded from the calculation of the summary score. A summary score was calculated for each paper by summing the total score obtained across relevant items.

Appendix A2: Study quality ratings

Kmet et al., (2004) Criterion	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 Question	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2 Design	◘	◘	■	■	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	◘	■
3 Method	■	◘	■	■	■	■	◘	◘	■	◘	◘	■	■	◘	◘	■	◘	■
4 Subjects	■	○	■	■	○	■	■	■	◘	■	■	■	■	■	■	■	■	■
5 Randomisation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	◘	n/a	n/a	n/a
6 Blind researchers	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	■	n/a	n/a	n/a
7 Blind participants	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	○	n/a	n/a	n/a
8 Outcome measures	■	■	■	◘	■	◘	■	■	◘	◘	■	■	◘	■	◘	■	○	◘
9 Sample size	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
10 Analytic methods	■	■	■	■	■	◘	■	■	■	■	■	◘	■	○	◘	■	■	■
11 Variance	■	■	○	■	○	■	■	○	■	■	■	○	○	■	■	○	○	■
12 Confounds	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	○	n/a	n/a	n/a
13 Results	◘	■	■	■	■	■	■	■	■	■	■	○	■	■	○	■	■	■
14 Conclusions	■	■	■	■	■	■	■	◘	■	■	■	◘	◘	■	○	■	■	■
TOTAL	18	16	18	19	15	17	18	15	17	17	18	13	16	16	15	17	14	19

Symbol Key: ■ = 2 (yes); ◘ =1(partial); ○ = 0 (no)

Study Number: 1. Dahm et al., 2015; 2. Ferreira et al., 2014; 3. Hiraoka et al., (2015); 4. Hoffart et al., (2015); 5. Jativa & Cerezo (2014); 6. Maheux & Price (2015); 7. Maheux & Price (2016); 8. Miron et al., (2015); 9. Miron et al (2016); 10. Miron et al., (2014); 11. Scoglio et al., (2015); 12. Seligowski et al., (2014); 13. Tanaka et al., (2011); 14. Thompson & Waltz (2008); 15. Valdez & Lilly, (2015); 16. Vettese et al., (2011); 17. Westphal et al., (2016); 18. Zeller et al., (2014).

Appendix B:

Researcher's contribution to the joint project

This study was conducted as a part of a larger research project conducted by Iona Naismith and I in order to meet the requirements of a doctorate in clinical psychology. Iona Naismith collected data proximal factors such as fear of self-compassion, forms of self-criticism/attacking and self-reassurance, experiences of shame, and experiences in close relationships. These proximal factors were excluded in the analyses for the purposes of the current study which included measures of adverse childhood experiences.

Iona and I shared responsibility for developing and completing ethics application documentation, leading the experimental sessions, scoring questionnaires, data entry on SPSS and analysis of qualitative data. We also took it in turns to keep the research mobile for the purposes of contacting participants and sending them reminder text messages to practice the compassionate imagery exercises. We shared the responsibility of contacting staff at the service where we were recruiting to remind them to inform their clients about the study. Additionally we took turns to purchase snacks and other refreshments for participants to have during study sessions. I had responsibility for putting together and providing the questionnaire and compassionate imagery booklets for each of the study sessions. Iona was responsible for providing high street vouchers for participants.

Appendix C1 – NHS Research Ethical Approval

NHS
Health Research Authority
NRES Committee London - Camberwell St Giles

Level 3, Block B
Whitefriars
Lewins Mead
Bristol
BS1 2NT

Telephone: ▉▉▉▉▉▉▉

23 June 2015

Dr Janet Feigenbaum
Research Department of Clinical, Educational and Health Psychology
University College London
Gower Street, London
WC1E 6BT

Dear Dr Feigenbaum

Study title:	**Descriptive study examining correlates of compassionate imagery ability in personality disorder**
REC reference:	**15/LO/0747**
IRAS project ID:	**171656**

Thank you for your letter of 18th June 2015. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 22 May 2015

Documents received

The documents received were as follows:

Document	Version	Date
IRAS Checklist XML [Checklist_18062015]		18 June 2015
Participant information sheet (PIS) [Participant Information Sheet]	3	18 June 2015

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	Version	Date
Copies of advertisement materials for research participants [Advertising poster]	Version 1	06 April 2015
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Sponsor insurance evidence]	Version 1	01 April 2015
GP/consultant information sheets or letters [Letter to GP]	Version 1	07 January 2015
IRAS Checklist XML [Checklist_29042015]		29 April 2015

IRAS Checklist XML [Checklist_18062015]		18 June 2015
Letter from statistician [Letter from statistician]	Version 1	21 January 2015
Non-validated questionnaire [Imagery scripts]	Version 3	06 April 2015
Non-validated questionnaire [Demographic questionnaire]	Version 1	06 April 2015
Non-validated questionnaire [Questions relating to Imagery Execises]	Version 3	06 April 2015
Other [Summary CV for researcher 2 (AM)]	1	06 April 2015
Other [Permission to work across NHS Trusts]	Version 1	01 April 2015
Other [Peer review - Approval]	Version 2	25 January 2015
Participant consent form [Participant Consent form]	Version 3	23 February 2015
Participant information sheet (PIS) [Participant Information Sheet]	3	18 June 2015
REC Application Form [RecForm_snapshotIonaAmanda (2)]		17 April 2015
Research protocol or project proposal [Research protocol]	Version 7	11 March 2015
Summary CV for Chief Investigator (CI) [Summary CV for CI]	Version 1	13 February 2015
Summary CV for student [CV for researcher 1 (IN)]	Version 1	05 April 2015
Validated questionnaire [Childhood Trauma Questionnaire]	Version 1	07 January 2015
Validated questionnaire [Early memories of warmth scale]	Version 1	07 January 2015
Validated questionnaire [Experiences in Close Relationship Scale-Short]	Version 1	07 January 2015
Validated questionnaire [Experiences of Shame Scale]	Version 1	07 January 2015
Validated questionnaire [Fear of Compassion to Self Scale]	Version 1	07 January 2015
Validated questionnaire [Forms of self-criticism/-reassuring scale]	Version 1	07 January 2015
Validated questionnaire [Invalidating Childhood Environments Scale]	Version 1	07 January 2015
Validated questionnaire [PANAS short form]	Version 1	07 January 2015
Validated questionnaire [Self Compassion Scale]	Version 1	07 January 2015

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

15/LO/0747	**Please quote this number on all correspondence**

Yours sincerely
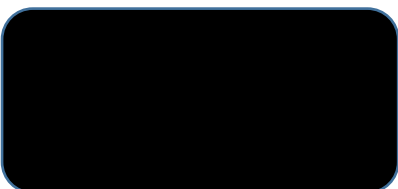
E-mail:

Appendix C2 – Study Poster

Help us to improve Compassion Focused Therapy and ***Earn £15!***

Research study:

Barriers to compassionate imagery

What: Attend a 90 minute group session at this service, which involves: Completing some questionnaires

- Trying out some imagery exercises (you are asked to imagine different scenarios)
- Sharing your experiences of these in a group, or on paper
- *Earning £10!*

PLUS: Spend 10 minutes a day practicing, then complete a 10 minute online questionnaire to let us know how you found it – to e*arn another £5*

Why: earn up to £15 and help us to improve Compassion Focused Therapy across the UK.

How to participate: speak to your clinician, or write your name below and we will contact y

Appendix C3 Information sheet

<div align="center">

PARTICIPANT INFORMATION SHEET

EXPLORING BARRIERS TO COMPASSIONATE IMAGERY

</div>

We would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take time to read the following information carefully. Talk to others about the study if you wish. Please ask us if there is anything that is not clear or if you would like more information. Take as much time as you need to decide whether or not you wish to take part.

Thank you for reading this information sheet.

1. Study Title

Exploring barriers to compassionate imagery

2. What is the purpose of the study?

The purpose of the study is to help to develop Compassion-Focused Therapy (CFT) for people with people with diagnoses of personality disorder. We aim to identify common obstacles that people face when doing imagery exercises (a key part of CFT), so that the therapy can be adapted to help clients overcome these obstacles.

3. Why have I been chosen?

Clients who are in the first half of their time in therapy with IMPART have been invited to participate in this research.

4. Do I have to take part?

It is up to you to decide whether or not you take part. If you decide to take part you will be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw or not take part will not affect your NHS treatment in any way.

5. What will happen to me if I decide take part?

You will be invited to attend a 90 minute group session. In the session, you will be asked to complete some questionnaires about current symptoms and past experiences. You will then be asked to try out some imagery exercises (where you are asked to imagine different scenes), and after each exercise you will be asked a few questions about how you found these. At the end you will be invited to share your experiences of all the different exercises in a group or in writing. The group feedback will be audio-recorded, but this material will be destroyed at the end of the study, and you do not need to talk unless you wish to.

After the group session, you will be invited to practice one 10 minute exercise each day for a week, and then complete a few questions about how you found this. The results will be used to see whether imagery exercises can be helpful, and to identify common obstacles to using them on a daily basis.

6. What are the side effects of taking part?

Some of the questionnaires used in this study may trigger some distressing memories, although we do not expect them to be more distressing than other questionnaires routinely used in mental health settings. If you do feel distressed, clinicians will be on hand to talk to and, if necessary, help you make a plan to stay safe.

7. What are the possible disadvantages and risks of taking part?

Other than the side effects just mentioned, there are no known disadvantages or risks to taking part. However if you personally feel uncomfortable in answering any of the questions in this study you can immediately withdraw from the study without penalty. The researchers are happy to answer any questions or concerns you may have at any point during the study (contact details below).

8. What are the benefits of taking part?

You will be reimbursed £10 for taking part in the 90 minute group session. If you choose to do the the follow-up part of the study (practicing the exercise and completing questions a week later), you will be paid another £5 for your time. We anticipate that this study will improve treatment for people with a personality disorder across the UK.

10. What happens with the results/data?

In April 2016 you will be invited to attend a meeting where the results of this study are presented and asked for any ideas about how to understand the results and how they could help therapy. You will be sent by email or post a copy of the results of the study once it has been approved by UCL in October 2016.

If you wish for your data to be withdrawn from the study at any time even after you have finished the experimental session, you may contact us and we will remove your data.

11. Will my taking part in this study be kept confidential?

All information which is collected about you during the course of this research will be kept strictly confidential. All data will be anonymous. You will be assigned a code at the beginning of the study, and the list linking the names and codes will be kept separate from the data, in a locked filing cabinet. Audio recordings made of the group discussions will be kept on an encrypted memory stick and destroyed after transcription.

12. What happens if something goes wrong?

If you have a concern about any aspect of this study, you should ask to speak to Iona Naismith or Amanda Mwale, who will do their best to answer your questions (see contact details below).

If you are not happy with the answers you get from Amanda and Iona, then you may contact Dr. Janet Feigenbaum (clinical and strategic lead for ████████ and chief investigator for this study), to raise your concerns. If you are not happy with her response you may approach the manager of the Research department ████████████████████ Finally, if you remain unhappy and wish to complain formally, you can do this through the NELFT complaints department.

13. How will people find out about the results of this study?

The results will be written up in the form of a report for review by University College London (UCL) as part of our Clinical Psychology Doctorate courses. This report will also be published in relevant journals outside UCL. We expect also to give some presentations at conferences for clinicians to learn about the findings. Please note that all information provided by you will be anonymised, so you will not be identified in any report.

5. Who is funding the research?

The research is being funded by University College London.

6. Who has reviewed the study?

The study has been reviewed by UCL and an NHS Research Ethics Committee.

Contact for further information

For further information, please do not hesitate to contact:

Iona Naismith or Amanda Mwale

Email: ██████████████████████████████

Post: Research Department of Clinical, Educational and Health Psychology, University College London, Gower Street, London, WC10 6BT

Or

Dr. Janet Feigenbaum, ████████████████████████████

Email: ████████████████████████████

Phone: ████████████████████

You will be given a copy of the information sheet and a signed consent form to keep.

Thank you for considering to participate in this study

Appendix C4 – Consent Form

North East London **NHS**
NHS Foundation Trust

≜UCL

INFORMED CONSENT FORM

Title of Project: Exploring barriers to compassionate imagery

Investigators: Iona Naismith and Amanda Mwale

Please initial the box for all statements that apply:

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

2. I have been given contact details for the researchers in the information sheet. ☐

3. I understand that my participation is entirely voluntary, the data collected during the research will not be identifiable, and I have the right to withdraw from the project at any time without any obligation to explain my reasons for doing so. ☐

4. I understand that my GP and IMPART therapist will be aware of my involvement in the study, but not the specific information I give. ☐

5. I understand that if I participate in this study, my therapist will give details of my mental health diagnoses for research purposes. ☐

6. I understand that I will be asked if I wish to be audio-recorded whilst providing feedback about the session. If I do not wish to be recorded, the researchers can offer paper for written feedback instead. Any audio-recordings will be destroyed once the tapes have been transcribed. ☐

7. I understand that in accordance with current UCL Records Management Policy, research findings will need to be stored by UCL as sponsor for 20 years after the research has finished. The UCL Records Office provides a service to UCL staff and maintains archived records in a safe and secure off site

location. All activities are conducted in accordance with the Data Protection Act and UCL Data □
Protection Policy. Access to the data is strongly regulated and permissions to access the data are
treated case by case.

8. I understand that the information that I provide will be included in the researcher's doctoral thesis
and will be published in a scientific journal. I understand that all information included will be □
anonymised to protect my identity.

9. I give my consent to take part in this study. □

_____   _____   _____

         Print name   Date   Sign Name

         (Participant)

_____   _____   _____

         Print name   Date   Sign Name

         (Investigator)

Appendix D1 – Demographic Questions

Compassionate Imagery study - Demographic Questionnaire

Age (years): _____

Gender (please tick one box):

□ Male

□ Female

□ Trans

□ Other

Ethnicity (please tick one box):

□ White

□ Mixed / multiple ethnic groups

□ Asian / Asian British

□ Black / African / Caribbean / Black British

□ Other ethnic group

Marital status (please tick one box):

□ Single

□ Married or in civil partnership

□ Separated

□ Divorced

□ Widowed

Education: What is the highest degree or level of school you have completed? (Please tick one box)

□ No formal qualifications

□ GCSE level education or equivalent

□ A-Level education or equivalent

□ Vocational education (eg NVQ, HNC, HND)

□ Degree or Graduate education (eg BSc, BA)

□ Post-graduate education (eg PhD, MSc, MA)

Employment status (please tick one box):

□ Employed

□ Self-employed

□ Unemployed

□ A homemaker

□ A student

□ Retired

□ On disability allowance

Appendix D2 – Childhood Trauma Questionnaire

Test has been excluded due to copy write.

Appendix D3 - Invalidating Childhood Environments Questionnaire

The following questions address your experiences of how your parents responded to your emotions when you were young. For each item, please choose the rating from 1 to 5 that most closely reflects your experience up to the age of 18 years.

1 – Never

2 – Rarely

3 – Some of the time

4 – Most of the time

5 – All of the time

Because your parents may have been very different, please rate them separately (rating 1-5)

	During my childhood…	Mother	Father
1	My parents would become angry if I disagreed with them.		
2	When I was anxious, my parents ignored this.		
3	If I was happy, my parents would be sarcastic and say things like: "What are you smiling at?"		
4	If I was upset, my parents said things like: "I'll give you something to really cry about!"		
5	My parents made me feel OK if I told them I didn't understand something difficult the first time.		
6	If I was pleased because I had done well at school, my parents would say things like: "Don't get too confident".		
7	If I said I couldn't do something, my parents would say things like: "You're being difficult on purpose".		
8	My parents would understand and help me if I couldn't do something straight away.		
9	My parents used to say things like: "Talking about worries just makes them worse".		
10	If I couldn't do something however hard I tried, my parents told me I was lazy.		
11	My parents would explode with anger if I made decisions without asking them first.		
12	When I was miserable, my parents asked me what was upsetting me, so that they could help me.		
13	If I couldn't solve a problem, my parents would say things like: "Don't be so stupid — even an idiot could do that!"		
14	When I talked about my plans for the future, my parents listened to me and encouraged me.		

During my childhood …

Finally, we would like to know how you saw your whole family when you were younger. Please read the following descriptions and rate how closely each one matches your experience of growing up in your family (up to 18 years).

1 – not like my family

2 – a little bit like my family

3 – like my family some of the time

4 – like my family most of the time

5 – like my family all of the time

	Family type	Rating 1-5
1	During my childhood, my parents were often not available, and I got little time or attention. I was often left to fend for myself or go round to friends/relatives. My parents often got angry if I asked for things. One or both of my parents may have had substance misuse difficulties, mental health problems or financial problems.	
2	During my childhood, I felt listened to and cared for. My parents were interested in my thoughts and ideas and encouraged me to make my own decisions and choices. If things were difficult for me, they supported me and tried to comfort me.	
3	During my childhood, everything in my family was perfect on the surface. However, my parents couldn't stand it if I showed I was upset, scared or angry. They expected me to put hide my feelings and get on with it.	
4	During my childhood, it was important to be able to control your emotions and focus on achievement and success. "Behaving like a grown-up" was desirable.	

Appendix D4 – Early Memories of Warmth Scale

EMWS Scale

This scale explores some of your emotional memories of your childhood. Below is a set of questions that tap various feelings you may have experienced when you were young. Please read each item carefully and circle the number to the right of the statement that best describes your feelings during childhood. Use the scale below.

| 0 = No, never | 1 = Yes, but rarely | 2 = Yes, sometimes | 3 = Yes, often | 4 = Yes, most of the time |

1. I felt safe and secure   0 1 2 3 4

2. I felt appreciated the way I was   0 1 2 3 4

3. I felt understood   0 1 2 3 4

4. I felt a sense of warmth with those around me   0 1 2 3 4

5. I felt comfortable sharing my feelings and thoughts with those around me   0 1 2 3 4

6. I felt people enjoyed my company   0 1 2 3 4

7. I knew that I could count on empathy and understanding from people close to me when I was unhappy   0 1 2 3 4

8. I felt peaceful and calm   0 1 2 3 4

9. I felt that I was a cherished member of my family   0 1 2 3 4

10. I could easily be soothed by people close to me when I was unhappy   0 1 2 3 4

11. I felt loved   0 1 2 3 4

12. I felt comfortable turning to people important to me for help and advice   0 1 2 3 4

13. I felt part of those around me.   0 1 2 3 4

14. I felt loved even when people were upset about something I had done   0 1 2 3 4

15. I felt happy   0 1 2 3 4

16. I had feelings of connectedness   0 1 2 3 4

17. I knew I could rely on people close to me to console me when I was upset   0 1 2 3 4

18. I felt cared about   0 1 2 3 4

19. I had a sense of belonging   0 1 2 3 4

20. I knew that I could count on help from people close to me when I was unhappy   0 1 2 3 4

21. I felt at ease   0 1 2 3 4

self-compassion scale: short form

how I typically act towards myself in difficult times ...

please read each statement carefully before answering; using the scale given below indicate, to the right of each item, how often you behave in the stated manner:

almost never			almost always	
_1_	_2_	_3_	_4_	_5_

_1_	_when I fail at something important to me I become consumed by feelings of inadequacy_	
2	I try to be understanding and patient towards those aspects of my personality I don't like	
3	when something painful happens I try to take a balanced view of the situation	
_4_	_when I'm feeling down, I tend to feel like most other people are probably happier than I am_	
5	I try to see my failings as part of the human condition	
6	when I'm going through a very hard time, I give myself the caring and tenderness I need	
7	when something upsets me I try to keep my emotions in balance	
_8_	_when I fail at something that's important to me, I tend to feel alone in my failure_	
9	_when I'm feeling down I tend to obsess and fixate on everything that's wrong_	
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 disapproving and judgmental about my own flaws and inadequacies_	
_12_	_I'm intolerant and impatient towards those aspects of my personality I don't like_	

Appendix D6 – Positive and Negative Affect Scale

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now, that is, at the present moment *OR* indicate the extent you have felt this way over the past week (circle the instructions you followed when taking this measure)**

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested   _____ 11. Irritable

_____ 2. Distressed   _____ 12. Alert

_____ 3. Excited   _____ 13. Ashamed

_____ 4. Upset   _____ 14. Inspired

_____ 5. Strong   _____ 15. Nervous

_____ 6. Guilty   _____ 16. Determined

_____ 7. Scared   _____ 17. Attentive

_____ 8. Hostile   _____ 18. Jittery

_____ 9. Enthusiastic   _____ 19. Active

_____ 10. Proud   _____ 20. Afraid

Appendix E1 - Imagery Exercises Script A (Compassionate Imagery from Memory)

Before we start the study, please make sure your mobile phones are turned off!

<Once everyone confirms that they have completed their questionnaires>

<Begin with introductions again>

We are Iona and Amanda. We thank you for coming today. Has everyone read the information sheet and signed a consent form?

Now that you have completed your questionnaires, we will begin the group task with some relaxing breathing exercises. After that we will explain a bit about the imagery exercises and do a practice round to get you used to the imagery before you do it again. We will be asking you to fill out brief measures of how clear the images were to you and also how you are feeling. We will have a feedback session at the end to talk about how you found the exercises. The discussion at the end of the session will be audio-recorded, but if you do not want to be recorded, you can fill out a paper questionnaire instead. Does anyone have any questions so far?

SCRIPT A – Memory

Relaxing Breathing Exercise:

We will start with a relaxed breathing exercise. Sit as comfortably as possible in a chair, place your feet flat on the floor and close your eyes (if you like).

We are going to do 10 slow abdominal breaths. Place one hand on your abdomen right beneath your rib cage. I would like you to breathe in deeply and slowly, to send the air as deep into your lungs as possible. If you are breathing from your abdomen, you should feel your hand rise, rather than your chest. As you exhale, imagine all of the tension draining out of your body.

Breathe in, slowly count to four, then breathe out to the count of four. Take a few breaths like this. *[people get bored after 5 breaths so don't leave too long!]*

Preparing for each imagery exercise:

Now we are going to prepare you for the imagery exercises. We are going to guide you through imagining something – with pictures, sounds, and sensations.

Whenever we try to do certain tasks using our mind, a very common difficulty is that our mind wanders all over the place, particularly if we're agitated or restless. Remember that your mind is likely to wander and you might not be able to hold it on task for more than a couple of seconds. That is completely normal – the important thing is just to try. Just notice when your mind has wandered and to bring it back to the task at hand.

Another common concern is that people often don't have clear pictures in their mind when they do imagery. Again this is perfectly normal as we very rarely have clear pictures in our minds. They tend to be more like fleeting impressions, a touch of colour here, or a sense of something there. Imagining hearing things can be easier sometimes, especially imagining people speaking to us, so you might want to focus on this. However, the key focus of imagery exercises is the *feelings* that we try to generate. Keep these things in mind when we go through the next exercises..

Generic positive imagery exercise

In this imagery we are going to create an image of us doing something relaxing.

Place both feet flat on the floor, shoulder's width apart, and rest your hands on your legs. Close your eyes or look at the floor if you prefer.

Gently focus on your breathing. Take a few breaths from your abdomen. Notice the flow of air coming in and out of your nose. No need to change anything, just allow things to be as they are.

It's ok for your mind to wander – just notice this with curiosity and gently guide it back to the breathing.

. Feel your arms and legs becoming loose and relaxed...and your shoulders…

When you are ready, Imagine you are walking toward the ocean.... around you is a beautiful, tropical forest....

Imagine your body posture being relaxed. Spend a minute imagining what you can see around you, maybe the trees are moving in the breeze, what colour is the sea…?

Spend a minute focussing on the sounds around you [pause for 10 seconds]

Spend a minute focussing on how relaxed you feel…enjoy the environment around you, take it all in [pause for 10 seconds]

Spend a minute exploring the empty beach, feel the sand on your feet, if you like, walk down to the ocean and feel the cool water on your skin…[pause for 10 seconds]

Allow yourself to feel content and relaxed, allow these feelings to grow. Remember to keep your body posture as relaxed as you can. Spend a few minutes with that experience. [pause for 20 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

[8 minutes to here]

- Now turn to page **page 1** of your imagery booklet and rate your experience of the imagery.

Explaining rationale for compassion

In the next part of the study, we will do an imagery exercise where we imagine a figure being *compassionate* to us. We believe that this is one way to manage difficult emotions. Why is this? Well, when someone acts in a warm, kind, and caring way with us, they send us external signals of compassion, making us feel safe and soothed. But we can also *imagine* someone

acting toward us in a warm, kind, and caring way, or actually talk to *ourselves* in this way, and send our brain internal signals of compassion. Again, doing either of these things internally creates the same safe and soothed response in our brain and body.

So to help you to create a compassionate figure in your mind, I will first explain to you what we mean by compassion, and what *qualities* we would like you to give your compassionate figure..

There are four key elements of compassion: wisdom, strength, warmth and responsibility.

Wisdom means understanding that life can be very difficult, through no fault of our own. Our emotions, thoughts, and our sense of self come from our genes and our life experiences. However, we don't choose the genes we get, and we don't choose our most powerful life experiences (such as the relationships we were born into). Wisdom means realizing that it is *not our fault* that we are struggling to take control of powerful emotions and unwanted thoughts.

Wisdom also means knowing that we can change, yet that self-criticism is not an effective way to change ourselves. *Wisdom* means knowing that compassion will help us change. The wise person will not blame or criticise () but genuinely helps us to change for the future.

Strength means having the confidence and determination to face our suffering, and work through our difficulties. When creating a compassionate image, you may wish to give a posture that helps us feel confident.

Warmth is related to how a compassionate person feels towards others. Warm people aren't just nice, they have a real desire to be helpful. You might give your compassionate image a warm voice and a compassionate expression to help you sense this quality.

Finally, *Dependability* means to be committed to supporting others, and being there for someone no matter what.

So in summary, a compassionate figure…

- Knows that it is not our fault that we struggle with our emotions sometimes
- Doesn't criticize us for the past, but helps us focus on changing for the future.
- Gives us the confidence to work through our difficulties
- Is warm and helpful
- Is completely committed to us.

Compassionate imagery exercise – Ideal compassionate image

We will now have a short practice of compassionate imagery, then give you a chance to ask questions before we try the main exercise. *In this imagery we are going to create an image of someone being compassionate to us, based on a memory. If you are depressed or distressed those might be difficult feelings to generate, but the important thing is to try the exercise - feelings may follow later.*

Place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing. As you breathe in, feel your stomach lift, and as you breathe out, feel it fall. Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to your breathing as best as you can.

Allow your body posture to become compassionate. Create a compassionate facial expression – a gentle facial expression, perhaps involving a slight smile or relaxed posture.

When you feel ready, bring to mind a memory of a time when someone was kind to you. This memory shouldn't be of a time when you were very distressed, because you will then focus on the distress. [PAUSE for 15 seconds].

Create a compassionate expression on your face and a body posture which gives you the sense of kindness as you recall. Spend one minute exploring the facial expressions of the person who was kind to you [pause for 10 seconds].

Sometimes it helps if you see them moving towards you, or see their face breaking into a smile, or their head on one side.

Spend a minute focusing on the kinds of things this person said and the tone of their voice [pause for 10 seconds].

Spend a minute focusing on the feeling of the emotion in the person, what they really felt for you at that moment [pause for 10 seconds].

Now focus on the whole experience, maybe whether they touched you or helped you in other ways, and notice your sense of gratitude and pleasure at being helped. Remember to keep your facial expression as compassionate as you can. Spend a few minutes with that memory [pause for 10 seconds].

When you are ready, gently let the image fade, and come out of the exercise, into the room.

[17 minutes to here]

- Have people got any questions before we do this again? [ANSWER QUESTIONS]
- Just before we try again, let us do a bit of that breathing again to help us get ready.
- [REPEAT RELAXATION]

Sit as comfortably as possible in a chair, place your feet flat on the floor and close your eyes (if you like).

We are going to do 10 slow abdominal breaths. Place one hand on your abdomen right beneath your rib cage. I would like you to breathe in deeply and slowly, to send the air as deep into your lungs as possible. If you are breathing from your abdomen, you should feel your hand rise, rather than your chest. As you exhale, imagine all of the tension draining out of your body.
Breathe in, slowly count to four, then breathe out to the count of four. *Take a few more breaths like this.*

It would be helpful for us to know how you are feeling right now – so please turn to **page 2** and answer the questions.

- [EXTENDED COMPASSIONATE IMAGERY]

We are now going to try the compassionate imagery again. You might want to create the same image in your mind again, or you might want it to look or sound different – either is fine.

In this imagery we are going to create an image of someone being compassionate to us, based on a memory. If you are depressed or distressed those might be difficult feelings to generate, but the important thing is to try the exercise - feelings may follow later.

Place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing. As you breathe in, feel your stomach lift, and as you breathe out, feel it fall. Spend a moment noticing the flow of air coming in and out of your nostrils….just gently observing….no need to change anything…..just allowing things to be as they are [Pause for 10 seconds].

Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to your breathing as best as you can [Pause for 10 seconds]..

Allow your body posture to become compassionate. Create a compassionate facial expression – a gentle facial expression, perhaps involving a slight smile or relaxed posture.

When you feel ready, bring to mind a memory of a time when someone was kind to you. This memory shouldn't be of a time when you were very distressed, because you will then focus on the distress. The point of the exercise is to focus on a desire to help and be kind [Pause for 15 seconds].

Create a compassionate expression on your face and a body posture which gives you the sense of kindness as you recall.

Spend one minute exploring the facial expressions of the person who was kind to you [Pause for 10 seconds].

Sometimes it helps if you see them moving towards you, or see their face breaking into a smile, or their head on one side.

Spend a minute focusing on the kinds of things this person said and the tone of their voice [Pause for 10 seconds].

Spend a minute focusing on the feeling of the emotion in the person, what they really felt for you at that moment [Pause for 10 seconds].

Now focus on the whole experience, maybe whether they touched you or helped you in other ways, and notice your sense of gratitude and pleasure at being helped. Allow that experience of gratitude and joy in being helped to grow [Pause for 10 seconds].

Remember to keep your facial expression as compassionate as you can. Spend a few minutes with that memory [Pause for 30 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to page **3 and 4** of your imagery booklet and rate your experience of the compassionate imagery. There will also be a chance to discuss how people found this task at the very end.

Experimental manipulation of mood

As part of this study, we are also interested in how clearly you can picture a difficult memory from a past relationship. It is useful for us to know how you manage this, but if this becomes too distressing feel free to stop the exercise and wait till the end.

When you feel ready, please bring to mind a memory of having been criticized or rejected? by someone who matters to you. [pause 10 seconds] What did they look like at the time? Can you remember their facial expression or their posture? [pause 10 seconds]

Can you remember what they said to you and their tone of voice? [pause 10 seconds]

How did that experience make you feel in your body?
What urges did you have?
Did your face change?
If you spoke, what happened to your voice?
Can you remember what emotion you felt?

Spend a few minutes with that memory. [pause 20 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to **page 5**of your imagery booklet and rate your experience of that last imagery exercise.
- Now turn to **page 6** to rate how you are feeling now

- For the last time, we are going to do the compassionate imagery again.
- [REPEAT EXTENDED COMPASSIONATE IMAGERY]

We are now going to try the compassionate imagery once again. You might want to create the same image in your mind again, or you might want it to look or sound different – either is fine.

Again, place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing. As you breathe in, feel your stomach lift, and as you breathe out, feel it fall. Spend a moment noticing the flow of air coming in and out of your nostrils….just gently observing….no need to change anything…..just allowing things to be as they are [Pause for 10 seconds].

Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to your breathing as best as you can [Pause for 10 seconds]..

Allow your body posture to become compassionate. Create a compassionate facial expression – a gentle facial expression, perhaps involving a slight smile or relaxed posture.

When you feel ready, bring to mind a memory of a time when someone was kind to you. This memory shouldn't be of a time when you were very distressed, because you will then focus on the distress. The point of the exercise is to focus on a desire to help and be kind [Pause for 15 seconds].

Create a compassionate expression on your face and a body posture which gives you the sense of kindness as you recall.

Spend one minute exploring the facial expressions of the person who was kind to you [Pause for 10 seconds].

Sometimes it helps if you see them moving towards you, or see their face breaking into a smile, or their head on one side.

Spend a minute focusing on the kinds of things this person said and the tone of their voice [Pause for 10 seconds].

Spend a minute focusing on the feeling of the emotion in the person, what they really felt for you at that moment [Pause for 10 seconds].

Now focus on the whole experience, maybe whether they touched you or helped you in other ways, and notice your sense of gratitude and pleasure at being helped. Allow that experience of gratitude and joy in being helped to grow [Pause for 10 seconds].

Remember to keep your facial expression as compassionate as you can. Spend a few minutes with that memory [Pause for 30 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to **page 7 and 8** of your imagery booklet and rate your experience of the compassionate imagery.
-
-
- [INTRODUCE OPEN QUESTIONS] – questions about how you found it all.
- [START RECORDING]

How did you find it?

When did you find the image was easiest to conjure up/hardest to conjure up – the practice time, the second time, or the third time?;

Can anyone identify emotions/thoughts/memories getting in the way of the imagery?

Based on today's session would you be willing to practice everyday for one week?

What blocks might get in the way of this?

That's the end of the experiment – thank you all so much for participating!
***********FUN SNACKS etc etc***********

Appendix E2 - Imagery Exercises Script B ("Ideal" Compassionate Imagery)

Before we start the study, please make sure your mobile phones are turned off!

<Once everyone confirms that they have completed their questionnaires>

<Begin with introductions again>

We are Iona and Amanda. We thank you for coming today. Has everyone read the information sheet and signed a consent form?

Now that you have completed your questionnaires, we will begin the group task with some relaxing breathing exercises. After that we will explain a bit about the imagery exercises and do a practice round to get you used to the imagery before you do it again. We will be asking you to fill out brief measures of how clear the images were to you and also how you are feeling. We will have a feedback session at the end to talk about how you found the exercises. The discussion at the end of the session will be audio-recorded, but if you do not want to be recorded, you can fill out a paper questionnaire instead. Does anyone have any questions so far?

SCRIPT B – Ideal

Relaxing Breathing Exercise:

We will start with a relaxed breathing exercise. Sit as comfortably as possible in a chair, place your feet flat on the floor and close your eyes (if you like).

We are going to do 10 slow abdominal breaths. Place one hand on your abdomen right beneath your rib cage. I would like you to breathe in deeply and slowly, to send the air as deep into your lungs as possible. If you are breathing from your abdomen, you should feel your hand rise, rather than your chest. As you exhale, imagine all of the tension draining out of your body.

Breathe in, slowly count to four, then breathe out to the count of four. Take a few breaths like this. *[people get bored after 5 breaths so don't leave too long!]*

Preparing for each imagery exercise:

Now we are going to prepare you for the imagery exercises. We are going to guide you through imagining something – with pictures, sounds, and sensations.

Whenever we try to do certain tasks using our mind, a very common difficulty is that our mind wanders all over the place, particularly if we're agitated or restless. Remember that your mind is likely to wander and you might not be able to hold it on task for more than a couple of seconds. That is completely normal – the important thing is just to try. Just notice when your mind has wandered and to bring it back to the task at hand.

Another common concern is that people often don't have clear pictures in their mind when they do imagery. Again this is perfectly normal as we very rarely have clear pictures in our minds. They tend to be more like fleeting impressions, a touch of colour here, or a sense of something there. Imagining hearing things can be easier sometimes, especially imagining people speaking to us, so you might want to focus on this. However, the key focus of imagery exercises is the *feelings* that we try to generate. Keep these things in mind when we go through the next exercises..

Generic positive imagery exercise

In this imagery we are going to create an image of us doing something relaxing.

Place both feet flat on the floor, shoulder's width apart, and rest your hands on your legs. Close your eyes or look at the floor if you prefer.

Gently focus on your breathing. Take a few breaths from your abdomen. Notice the flow of air coming in and out of your nose. No need to change anything, just allow things to be as they are.

It's ok for your mind to wander – just notice this with curiosity and gently guide it back to the breathing.

. Feel your arms and legs becoming loose and relaxed...and your shoulders…

When you are ready, Imagine you are walking toward the ocean.... around you is a beautiful, tropical forest....

Imagine your body posture being relaxed. Spend a minute imagining what you can see around you, maybe the trees are moving in the breeze, what colour is the sea…?

Spend a minute focussing on the sounds around you [pause for 10 seconds]

Spend a minute focussing on how relaxed you feel…enjoy the environment around you, take it all in [pause for 10 seconds]

Spend a minute exploring the empty beach, feel the sand on your feet, if you like, walk down to the ocean and feel the cool water on your skin…[pause for 10 seconds]

Allow yourself to feel content and relaxed, allow these feelings to grow. Remember to keep your body posture as relaxed as you can. Spend a few minutes with that experience. [pause for 20 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to page **page 1** of your imagery booklet and rate your experience of the imagery.

Explaining rationale for compassion

In the next part of the study, we will do an imagery exercise where we imagine a figure being *compassionate* to us. We believe that this is one way to manage difficult emotions. Why is this? Well, when someone acts in a warm, kind, and caring way with us, they send us external

signals of compassion, making us feel safe and soothed. But we can also *imagine* someone acting toward us in a warm, kind, and caring way, or actually talk to *ourselves* in this way, and send our brain internal signals of compassion. Again, doing either of these things internally creates the same safe and soothed response in our brain and body.

So to help you to create a compassionate figure in your mind, I will first explain to you what we mean by compassion, and what *qualities* we would like you to give your compassionate figure.

There are four key elements of compassion: wisdom, strength, warmth and responsibility.

Wisdom means understanding that life can be very difficult, through no fault of our own. Our emotions, thoughts, and our sense of self come from our genes and our life experiences. However, we don't choose the genes we get, and we don't choose our most powerful life experiences (such as the relationships we were born into). Wisdom means realizing that it is *not our fault* that we are struggling to take control of powerful emotions and unwanted thoughts.

Wisdom also means knowing that we can change, yet that self-criticism is not an effective way to change ourselves. *Wisdom* means knowing that compassion will help us change. The wise person will not blame or criticise () but genuinely helps us to change for the future.

Strength means having the confidence and determination to face our suffering, and work through our difficulties. When creating a compassionate image, you may wish to give a posture that helps us feel confident.

Warmth is related to how a compassionate person feels towards others. Warm people aren't just nice, they have a real desire to be helpful. You might give your compassionate image a warm voice and a compassionate expression to help you sense this quality.

Finally, *Dependability* means to be committed to supporting others, and being there for someone no matter what.

So in summary, a compassionate figure…

- Knows that it is not our fault that we struggle with our emotions sometimes
- Doesn't criticize us for the past, but helps us focus on changing for the future.
- Gives us the confidence to work through our difficulties
- Is warm and helpful
- Is completely committed to us.

Compassionate imagery exercise – Ideal compassionate image

We will now have a short practice of compassionate imagery, then give you a chance to ask questions before we try the main exercise. In this imagery we are going to create an image of someone being compassionate to us, someone made up by us. If you are depressed or distressed, it might be difficult feelings to generate compassionate feelings, but the important thing is to try the exercise - feelings may follow later.

Place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing. Take some deep breaths from your abdomen.   Spend a moment noticing the flow of air coming in and out of your nose.

Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to the exercise as best as you can.

Firstly, try to give your face a compassionate expression – a gentle expression, perhaps with a slight smile or relaxed posture.

.

Now, let's begin to create a compassionate image that you can meet. This is an image that really wants you to be free of suffering, to be able to deal with the difficulties, and to flourish. It knows that we are trying to make the best of our minds and lives. It understands that our minds are difficult, that emotions can run riot in us and that this is not our fault.

How would you like your ideal caring, compassionate image to look or appear? Would you want your ideal compassionate image to be old or young; to be male or female? [pause] It doesn't have to be a human – it could be an animal, the sea, or a colourful light. [pause for 10 seconds]

How would you like your compassionate image to sound? What would be a compassionate voice tone for you? [pause for 10 seconds]

How would you like your ideal compassionate image to relate to you? What would help you sense their commitment and kindness for you? [pause for 10 seconds]

How would you like to relate to your compassionate image?

Practice experiencing what it is like to focus on the feeling that another mind really values you and cares about you unconditionally. Spend some time with that image. [pause for 10 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

[17 minutes to here]

- Have people got any questions before we do this again? [ANSWER QUESTIONS]
- Just before we try again, let us do a bit of that breathing again to help us get ready.
- [REPEAT RELAXATION]

Sit as comfortably as possible in a chair, place your feet flat on the floor and close your eyes (if you like).

We are going to do 10 slow abdominal breaths. Place one hand on your abdomen right beneath your rib cage. I would like you to breathe in deeply and slowly, to send the air as deep into your lungs as possible. If you are breathing from your abdomen, you should feel your hand rise, rather than your chest. As you exhale, imagine all of the tension draining out of your body.
Breathe in, slowly count to four, then breathe out to the count of four. *Take a few more breaths like this.*

It would be helpful for us to know how you are feeling right now – so please turn to **page 2** and answer the questions.

- [EXTENDED COMPASSIONATE IMAGERY]

We are now going to try the compassionate imagery again. You might want to create the same image in your mind again, or you might want it to look or sound different – either is fine.

Again, place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing again. Take some deep breaths from your abdomen. Spend a moment noticing the flow of air coming in and out of your nose, no need to change anything.

Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to the exercise as best as you can.

Firstly, try to give *your* face a compassionate expression – a gentle expression, perhaps with a slight smile or relaxed posture.

Now, let's begin to create a compassionate image. Remember, this is an image that really wants you to be free of suffering, to be able to deal with the difficulties, and to flourish. It knows that we are trying to make the best of our minds and lives. It understands that our minds are difficult, that emotions can run riot in us and that this is not our fault.

How would you like your ideal caring, compassionate image to look or appear? Would you want your ideal compassionate image to be old or young; to be male or female? [pause] Again, it doesn't have to be a human – it could be an animal, the sea, or a colourful light. [pause for 10 seconds]

How would you like your compassionate image to sound? What would be a compassionate voice tone for you? [pause for 10 seconds]

Are there any other sensory qualities that would come with your image- colours, sounds, smells? [pause for 10 seconds]

How would you like your ideal compassionate image to relate to you, or interact with you? What would help you sense their commitment and kindness for you? [pause for 10 seconds]

How would you like to relate to your image? [pause for 10 seconds]

What is your compassionate image saying to you? [pause for 10 seconds]

Practice experiencing what it is like to focus on the feeling that another mind really values you and cares about you unconditionally. [pause] Now focus on the idea that your compassionate ideal is looking at you with great warmth. [pause]

Imagine that your image deeply desires that you be well, that you be happy, and that you be free of suffering. Spend a few minutes with that image. [pause for 30 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to page **3 and 4** of your imagery booklet and rate your experience of the compassionate imagery. There will also be a chance to discuss how people found this task at the very end.

Experimental manipulation of mood

As part of this study, we are also interested in how clearly you can picture a difficult memory from a past relationship. It is useful for us to know how you manage this, but if this becomes too distressing feel free to stop the exercise and wait till the end.

When you feel ready, please bring to mind a memory of having been criticized or rejected? by someone who matters to you. [pause 10 seconds] What did they look like at the time? Can you remember their facial expression or their posture? [pause 10 seconds]

Can you remember what they said to you and their tone of voice? [pause 10 seconds]

How did that experience make you feel in your body?
What urges did you have?
Did your face change?
If you spoke, what happened to your voice?
Can you remember what emotion you felt?

Spend a few minutes with that memory. [pause 20 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to **page 5**of your imagery booklet and rate your experience of that last imagery exercise.
- Now turn to **page 6** to rate how you are feeling now

- For the last time, we are going to do the compassionate imagery again.
- [REPEAT EXTENDED COMPASSIONATE IMAGERY]

We are now going to try the compassionate imagery once again. You might want to create the same image in your mind again, or you might want it to look or sound different – either is fine.

Again, place both feet flat on the floor, about shoulder's width apart, and rest your hands on your legs. Close your eyes, or look down at the floor if you prefer.

Now, gently focus on your breathing again. Take some deep breaths from your abdomen. Spend a moment noticing the flow of air coming in and out of your nose, no need to change anything.

Remember that it is perfectly ok for your mind to wander. Simply notice it happening with curiosity, and then gently guide your attention back to the exercise as best as you can.

Firstly, try to give *your* face a compassionate expression – a gentle expression, perhaps with a slight smile or relaxed posture.

Now, let's begin to create a compassionate image. Remember, this is an image that really wants you to be free of suffering, to be able to deal with the difficulties, and to flourish. It knows that we are trying to make the best of our minds and lives. It understands that our minds are difficult, that emotions can run riot in us and that this is not our fault.

How would you like your ideal caring, compassionate image to look or appear? Would you want your ideal compassionate image to be old or young; to be male or female? [pause] Again, it doesn't have to be a human – it could be an animal, the sea, or a colourful light. [pause for 10 seconds]

How would you like your compassionate image to sound? What would be a compassionate voice tone for you? [pause for 10 seconds]

Are there any other sensory qualities that would come with your image- colours, sounds, smells? [pause for 10 seconds]

How would you like your ideal compassionate image to relate to you, or interact with you? What would help you sense their commitment and kindness for you? [pause for 10 seconds]

How would you like to relate to your image? [pause for 10 seconds]

What is your compassionate image saying to you? [pause for 10 seconds]

Practice experiencing what it is like to focus on the feeling that another mind really values you and cares about you unconditionally. [pause] Now focus on the idea that your compassionate ideal is looking at you with great warmth. [pause]

Imagine that your image deeply desires that you be well, that you be happy, and that you be free of suffering. Spend a few minutes with that image. [pause for 30 seconds]

When you are ready, gently let the image fade, and come out of the exercise, into the room.

- Now turn to **page 7 and 8** of your imagery booklet and rate your experience of the compassionate imagery.
- [INTRODUCE OPEN QUESTIONS] – questions about how you found it all.
- [START RECORDING]

How did you find it?

When did you find the image was easiest to conjure up/hardest to conjure up – the practice time, the second time, or the third time?;

Can anyone identify emotions/thoughts/memories getting in the way of the imagery?

Based on today's session would you be willing to practice everyday for one week?

What blocks might get in the way of this?

That's the end of the experiment – thank you all so much for participating!
***********FUN SNACKS etc etc***********

Appendix E3: Imagery Booklet

PARTICIPANT NUMBER:

This is your imagery booklet. You will be instructed to fill this out during the imagery exercises by the researchers. The booklet contains 8 pages.

IMAGERY BOOKLET

General positive imagery (PAGE 1)

1) How easy did you find it to experience receiving the positive emotions?

1   2   3   4   5   6   7   8   9   10
Difficult   *Very Easy*

(Please circle your rating as follows: **1 - *no image at all,*   to 5 – *clear as if in person***).
2. To what extent could you…
a.   Hear sounds of your image
        1   2   3   4   5

b.   See the image clearly
        1   2   3   4   5

c.   Visualize movement in the image
        1   2   3   4   5

d.   Picture the image interacting with you
        1   2   3   4   5

3. How hard did you try to create a visual image for the positive emotions to come from?

        1   2   3   4   5   6   7   8   9   10
        Did Not Try   *Tried Hard*

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now,**

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested   _____ 11. Irritable

_____ 2. Distressed   _____ 12. Alert

_____ 3. Excited   _____ 13. Ashamed

_____ 4. Upset   _____ 14. Inspired

_____ 5. Strong   _____ 15. Nervous

_____ 6. Guilty   _____ 16. Determined

_____ 7. Scared   _____ 17. Attentive

_____ 8. Hostile   _____ 18. Jittery

_____ 9. Enthusiastic   _____ 19. Active

_____ 10. Proud   _____ 20. Afraid

Compassionate Imagery

1) How easy did you find it to experience receiving the compassionate emotions?

1   2   3   4   5   6   7   8   9   10

Difficult   *Very Easy*

(Please circle your rating as follows: **1 – *no image at all*** to **5 – *clear as if in person***).

2) To what extent could you…

a.   Hear the voice of the image

1   2   3   4   5

b.   See the facial expressions of the image
            1   2   3   4   5

c.   Visualize gestures of the image
            1   2   3   4   5

d.   Picture it interacting with you
            1   2   3   4   5

3) How hard did you try to create a visual image for the compassionate emotions to come from?

         1   2   3   4   5   6   7   8   9   10
       Did Not Try   *Tried Hard*

4) To what extent did your compassionate image (or other mind) have the following . ..

Wisdom

1   2   3   4   5   6   7   8   9   10
No Wisdom   *Infinitely Wise*

…Continued on Imagery Booklet page 4
{PLEASE TURN OVER}

Strength

1   2   3   4   5   6   7   8   9   10
No Strength   *Infinite Strength*

Dependability

1   2   3   4   5   6   7   8   9   10
Could Not Be Depended On   *Infinitely Dependable*

Warmth and kindness

1   2   3   4   5   6   7   8   9   10
Not warm or kind   *Very warm and kind*

5. If there is anything you felt or thought during the imagery that we haven't asked you about please write it below. You can also use this space to give us more general

feedback on your experience if you wish to (e.g. things you found difficult, or tips that you discovered for helping you feel compassion).

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Criticism Imagery

(Please circle your rating as follows: *1 – no image at all   to 5 – clear as if in person*).

1. To what extent could you…

a.   Hear sounds of your image
      1   2   3   4   5

b.   See the image clearly
      1   2   3   4   5

c.   Visualize movement in the image
      1   2   3   4   5

d.   Picture the image interacting with you
      1   2   3   4   5

2. How hard did you try to create the visual image ?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Did Not Try   *Tried Hard*

PANAS Questionnaire

This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. **Indicate to what extent you feel this way right now,**

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

_____ 1. Interested		_____ 11. Irritable
_____ 2. Distressed		_____ 12. Alert
_____ 3. Excited		_____ 13. Ashamed
_____ 4. Upset		_____ 14. Inspired
_____ 5. Strong		_____ 15. Nervous
_____ 6. Guilty		_____ 16. Determined
_____ 7. Scared		_____ 17. Attentive
_____ 8. Hostile		_____ 18. Jittery
_____ 9. Enthusiastic		_____ 19. Active
_____ 10. Proud		_____ 20. Afraid

Compassionate Imagery

1) How easy did you find it to experience receiving the compassionate emotions?

1   2   3   4   5   6   7   8   9   10

Difficult   *Very Easy*

(Please circle your rating as follows: **1 - *no image at all*** to **5 – *clear as if in person***).

2) To what extent could you…

a.   Hear the voice of the image

        1   2   3   4   5

b.   See the facial expressions of the image

        1   2   3   4   5

c.   Visualize gestures of the image

        1   2   3   4   5

d.   Picture it interacting with you

        1   2   3   4   5

3) How hard did you try to create a visual image for the compassionate emotions to come from?

1   2   3   4   5   6   7   8   9   10

Did Not Try   *Tried Hard*

4) To what extent did your compassionate image (or other mind) have the following . ..

Wisdom

1   2   3   4   5   6   7   8   9   10

No Wisdom   *Infinitely Wise*

Strength

1   2   3   4   5   6   7   8   9   10

No Strength   *Infinite Strength*

Dependability

1	2	3	4	5	6	7	8	9	10

Could Not Be Depended On   *Infinitely Dependable*

Warmth and kindness

1	2	3	4	5	6	7	8	9	10

Not warm or kind   *Very warm and kind*

5. If there is anything you felt or thought during the imagery that we haven't asked you about please write it below. You can also use this space to give us more general feedback on your experience if you wish to (e.g. things you found difficult, or tips that you discovered for helping you feel compassion).

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APPENDIX F: Detailed qualitative themes and examples

CATEGORY 1: Emotional experiences that hindered CFI generation

Theme 1: Anxiety and tension

Many participants reported that they experienced anxiety and tension during the CFI exercises. Some people went on to explain that the anxiety they felt impacted on their ability to concentrate on the task. Others described feeling "jittery" and conveyed a strong aversion to the "relaxed" state that they perceived the CFI exercises encouraged.

"I find it really hard to relax, I find that very jittery. When I try to relax, panic sets in, so I can't get into the relaxation mode. I'm used to feeling intense, and if I go into relaxation mode then I don't like the feeling. It's an out of control feeling." (Participant 2)

Whilst some people reported feeling anxious about the engaging with the CFI task itself, others reported feeling self-conscious within the group, which maintained their feelings anxiety.

"We are all so wrapped up in worrying about what other people are thinking about us…" (Participant 17).

Theme 2: The intrusion of distressing memories

Some participants reported that engaging with the compassionate imagery was hindered by emotional distress triggered by memories of adverse experiences. A number of these intrusions involved painful memories of mistreatment, emotional abuse and neglect both from childhood and adulthood.

"I thought about a lot of bad memories of childhood, relationships, especially an ex-partner…" (participant 15)

"Yes, many disturbing and dark memories from childhood mostly. But also from later life."(participant 30)

Even though the exercises brought up memories of adverse experiences for some individuals, a few reported that these distressing intrusions reduced as the experimental CFI task and experimental session progressed.

"A few memories of when I was a child and some painful memories of my past came up, but not a lot towards the end." (Participant 9)

Since the experimental manipulation of mood involved picturing a memory of being criticised, many participants reported that they found it difficult to disregard the critical imagery, which intruded into the subsequent CFI task.

"After I immersed myself in this negative memory of an incident of emotional abuse from my childhood, I was no longer able to access the compassionate image I had created beforehand." (Participant 13)

The powerful effect of the critical imagery visualised was also particularly problematic for those who reported that they struggled to visualise any compassionate imagery.

"The first time there was nothing. But after the distressing one, they were intruding into the follow-up." (participant 19)

"It's almost impossible. If you struggle to find a compassionate image anyway and then you are asked to think about people swearing and saying horrible things to you, and then you are asked to think of the lovely thing again, it is so hard!" (participant 49)

However, there were a few participants who reported that they were better able to make use of the compassionate image after picturing a memory of being criticised. They reported being better able to utilise its soothing qualities when they felt more distressed. It seemed that drawing on pre-existing coping mechanisms also helped to draw on compassion following the mood manipulation.

"I held onto a lot of my coping mechanisms, I thought of things that have worked for me to manage the memories of certain things, so I found that quite comforting…I've got a feral cat and when I am very down and depressed,… she comes and lies on me,… I didn't have to try and think "try and feel compassionate", I felt loved." (participant 8)

Theme 3: Feelings of loss related to lack of compassionate experiences in one's life

Many participants reported that they would have wanted to experience more compassion in their relationships so that they could draw from these. Through the CFI task, some participants conveyed a sense of coming to the difficult realisation of having missed an important experience of compassion from others, particularly caregivers. This realisation triggered feelings of loss, sadness, loneliness and emptiness for various people. These ideas were similar for participants who were asked to imagine a desired 'ideal' nurturer and those asked to imagine a compassionate 'other' from a past memory.

"I always wanted someone to be compassionate. For me I've never had it, so that's why it was quite difficult imagining it and then thinking yeah, I've never gotten it." (Participant 38)

"I felt a sense of sadness and despair through doing this. Caused emotions of loss…" (Participant 25)

One participant even described her emotional experience as being akin to grieving and mourning. Others in the group who shared similar views reported that such feelings made the task of imagining a compassionate 'other' emotionally demanding and overwhelming. In addition to loss, some participants also reported feeling rejected by people who withheld compassion, which triggered anger and sadness.

CATEGORY 2: Thought processes that hindered CFI generation

Theme 1: Self-Critical thoughts

Many participants reported that they found themselves engaging in self-critical thoughts that that hindered the generation of CFI. A number of participants spoke about judging their engagement with the exercises negatively. Some of the participants found themselves becoming frustrated because they were not "doing it perfectly" and one person said that not achieving a "perfect image" led to disengagement from the task. Other participants had concerns that they were somehow defective when they found it challenging to picture a compassionate 'other'.

"I was thinking, am I so far abnormal that I can't even get a flicker of a picture?" (Participant 39)

"I had self-critical thoughts like what's wrong with me, why can't I do this, why am I not getting anything?" (Participant 50)

Some people criticised themselves about the types of imagery they generated, believing that it was unacceptable and an indication of undesirable personal characteristics. Others found themselves engaging in criticising how they perceived they were engaging interpersonally within the group whilst they were being guided through the exercises.

"I was thinking, is it ok that I want myself as a perfect self to talk to me, but no, that is self-obsession." (Participant 32)

"I was telling myself, you are being too loud, you were talking too much!" (Participant 32)

Theme 2: Mistrust of the compassionate 'other'

Many participants who managed to generate an imagined impression, discussed experiencing difficulties with being able to "trust" their compassionate 'other'. Some talked about being defensive and actively resisting engagement with an image in response to their feelings of mistrust. Participants also talked about having suspicions about the hidden motives of the compassionate 'other' imagined. Those that expressed their mistrust seemed to be imagining a malevolent perpetrator with harmful intentions, rather than a caring nurturer.

"I was pushing them away, I didn't want them near me. Everything they were saying I didn't believe at all." (Participant 22).

"It was manipulative, evil, untrustworthy and it was just like a black shadow and I did not trust it whatsoever. And that happened twice." (participant 6).

Rather than attending to compassionate qualities of the image generated, some participants actively searched for evidence that supported their feelings of mistrust, even if they could access alternative thoughts.

"It's almost like you're looking at it as an observer and you're looking for every tell-tale sign, a little bit of body language, like what do you mean cause you're doing that.? That's that. You pick holes in everything". (Participant 14)

"…you look for all those things to clarify what you believe in your mind…, but 9 times out of 10, I'm quite wrong."(Participant 11)

In addition to looking out for signs of threat, some participants also reported that they chose to avoid the image by "shutting down" or "closing off" due to fears of being subjected to emotional hurt or pain. One participant described an urge to "run out the door" in response to the prospect of the imagined figure approaching them. Alternatively, for a few people, trust seemed to grow with each subsequent CFI practice during the experimental session and their response was the opposite; they felt safe and welcomed the compassionate 'other'.

"That's kind of like almost asking you to trust someone you don't know, but more like the third time I went back to them, it did like, for me anyway feel a bit safer. Cause it's like, I don't know, it felt like coming back to someone."(Participant 22)

Theme 3: Perceived risks to wellbeing through engaging in CFI

A few participants described thinking that engagement with the CFI task would lead to uncontrollable changes to their mental wellbeing which led to different responses. For instance, one person described being fearful of triggering traumatic flashbacks of childhood abuse through "going inside [her] mind" which was felt to be too difficult to tolerate. Understandably, this led to deliberate avoidance of the compassionate imagery. Another participant, who persisted with the follow-up study described feeling under threat of psychotic symptoms returning due to the negative thoughts and feelings that were triggered whilst engaging in CFI.

However, this participant seemed to be more able to tolerate their uncomfortable thoughts and feelings enough to persist with the CFI exercises.

Some participants believed the negative affect activated during the experimental tasks would persist beyond the session (e.g. for the rest of the day or longer). A few participants also reported that they thought one of the barriers that may preclude them from practicing CFI alone at home were the negative thoughts, feelings and memories that were triggered.

Theme 4: Imagery perceived to be too unrealistic

Some participants talked about having thoughts about the CFI being unrealistic both during the exercise and when they reflected on the experience afterwards. Many reported that sensing a connection to the compassionate image and associated emotions was difficult because of this. Participants felt that even though they desired the compassion, the imagery did not match their reality given the lack of warmth, abuse and emotional neglect many of them have experienced. A few people even felt like the compassionate image generated was cruelly mocking them and not actually offering them something genuine and reliable.

"I thought stop kidding yourself…it's sort of like torture as well, like holding candy to a little kid. Like here you go do you want one and like nah, you can't have it and the person just eating it." (Participant 30)

"Cause you're waving this person in front of you, but they don't exist."(Participant 34)

The compassionate figure was also viewed as limited in its ability to be relatable in dynamic ways that were valued by some participants. One of these was the compassionate 'other's lack of bodily presence, which precluded the sharing of a physical life.

"But you can't really have fun with a compassionate image. So I guess that's a bit of a barrier there because you can't take it out into town or out to dinner!" (Participant 21)

Some people felt as though the unconditionally compassionate figure being imagined was setting up very high and unrealistic expectations of people in the outside world. Alternatively though, one participant highlighted the view that skills needed to deal with flawed people in real life could be categorised differently to CFI exercises which were teaching another set of skills.

"I guess that it is a completely different skill set you have to use when you are dealing with actual people. I guess just looking it as an exercise is probably helpful" (Participant 12)

Theme 5: Perceiving oneself to be undeserving of compassion

Some participants described being aware of thoughts about not deserving compassion whilst they were engaging in the CFI exercises. One concern was about feeling like a burden to others who they believed would be drained through offering compassion to them. For some, this seemed to be because they perceived themselves to have too many problems.

"I feel that I am dragging everybody down…" (Particiapnt 48)

"…people get sick of it, because you are in this cycle and they get frustrated with you, family and friends, you keep going over the same things – this happened and that happened, and you get in the same situation again and they just think you are an "F-up" and you need to sort your life out." (Participant 38).

A few participants reported that they ruminated about past mistakes that made them feel guilty about desiring compassion from others. Others specifically talked about experiencing feelings of shame that accompanied thoughts of not deserving compassion.

"I feel ashamed when people say that [kind words] to me, I get embarrassed, I go into a shell and I say thank you but I go into myself." (Participant 29).

CATEGORY 3: Mental Barriers

Theme 1: Distractions

Participants reported a range of distractions that precluded their concentration or grabbed their attention more strongly. Some of these things included noises in the room (e.g. clock ticking). Others reported that tiredness precluded their concentration and some commented on the repetitive nature of the imagery they were asked to create, which led to boredom and disengagement. Individuals who completed the follow-up reported similar distractions. In addition, arbitrary intrusive thoughts (e.g images of natural disasters) distracted a few participants. Others reported that their mind tended to wander to day-to-day concerns or even to pleasant thoughts that were unrelated to the exercises.

"My mind wanders constantly and I am constantly having to bring it back, so by the time the exercise is over, I haven't really got much in it. In my head I sometimes think it is pointless because my mind wanders so much." (Participant 51)

Theme 2:Perceived imagery ability

All participants were encouraged to use different senses to try and create their compassionate figure and that they should expect fleeting impressions. Even given these instructions, many participants focussed on difficulties that they experienced with creating a clear image. These perceived difficulties with creating a clear image appeared to be more

preoccupying for some people, which led to less of a focus on other characteristics of the compassionate 'other'.

"I found this task very difficult as I could not see an image in my head. There were seconds in which an image would appear but before being able to 'see' it, it would disappear." (Participant 18)

"Nearly impossible to recreate a compassionate image" (Participant 1)

"Just a dark space, various memories flashing but no set face."(Participant 41)

Others were also preoccupied by the different characteristics that they felt were missing from the imagery created. However, a few people acknowledged the difficulty with creating a clear image and persisted with the task.

"I found it difficult to maintain images of compassion visually, however with deep concentration, I was able to visualise flashes or snippets."(Participant 3)

"it is difficult to focus on anything really, but I think I was doing alright", (Participant 44)

Some participants who described having a vivid imagination or experience with meditation appeared to be better able to get a clearer image of the compassionate figure. These individuals tended to be better able to 'hold' the image for longer and draw comfort from it.

CATEGORY 4: Positive and therapeutic engagement with CFI exercises
Theme 1: Positive experiences of CFI

Participants that were able to develop impressions of a compassionate and caring 'other' reported feeling warm, happy, peaceful, calm and refreshed. Even though many

participants reported that they struggled to generate compassionate imagery as a result of difficult past experiences in relationships, some were pleasantly surprised to (re)discover memories of compassion from others.

"Yeah…I think it was nice that it came up, that actually, I had a few examples of supportive and kind people in my life, you know." (Participant 20)

"It was nice to think about some of the good things that have happened. So the compassionate people that have helped me with lots of stuff. (Particiapnt 43)

Amongst those who completed the follow up, there were individuals who found practicing the compassionate imagery throughout the week helpful. Some even increased practice to more than the suggested frequency (twice a day). These people reported that practicing CFI helped them to regulate difficult emotions that they experienced.

"I practiced a lot. Almost using it as a coping mechanism for when I felt distressed. It did work to some extent at certain times to provide some instant relief diversion." (Participant 13)

"I don't feel that I am consciously more compassionate towards myself but perhaps I am unconsciously. During the week, I was in a difficult and stressful situation and I used the compassionate imagery visualisation spontaneously as a self-soothing exercise and found it effective." (Participant 49)

Another participant replied to the reminder text message sent to her and reported that she was pleased that completing the exercises helped to encourage her to leave her house unaccompanied for 15 minutes a day as part of her treatment for agoraphobia. The CFI exercises helped some people to access the emotional safety and care that they felt was absent.

"I liked the fact I felt safe when I was doing it, I felt like I was in a safe place away from the harm of the world, that made me want to practise." (Participant 29)

"I will be practising this from now on, compassion has proved to be what I am missing and I find that it's helping alongside validation. Remembering this is encouraging enough for me" (Participant 13)

Theme 2: Imagery preference: human versus non-human images

Some participants expressed a specific preference for non-human imagery (e.g. an animal) or inanimate objects (e.g. grandfather's boat). A few people explained that this was because imagining a compassionate person was not realistic based on their past experiences. Some individuals also pictured religious figures such as Jesus and Buddah. However, a few people who pictured a benevolent God went on to question God's compassion since their persistent emotional pain had not been "fixed". Others preferred picturing their ideal future selves over a person known to them and repeated habitual self-reassuring statements they knew.

For participant's who decided to create a compassionate image based on people known to them, there was a tendency to picture examples of healthier relationships (e.g. a current loving partner). Others managed reminders others' imperfections either by accepting them and focussing on their positive qualities or changing their weaknesses through imagination.

"The person I focused on was an idealised version of a real person who does represent all of these things for me. Obviously the real version of her has flaws and weaknesses too but I erased those and built an ideal version." (Participant 23)

Some participants tended to remember specific compassionate words or phrases that were spoken to them in the past, and repeated these during the exercises. Some participants recalled vivid memories that involved particular facial expressions and emotions they experienced from

the 'other' as well as their emotional responses to their reactions.

"…a version of him. It was the image of when I first told him my experiences…everything that happened to me in my childhood and he looked at me in this one way that I can never forget,…with a way of love, unconditional love and nothing more than that. (Participant 37)

Others found that trying to picture a person had a double effect. A number of participants reported feeling threatened when asked to picture the facial expressions of their compassionate figure. However, even when these feelings and memories were triggered a few people were still able to draw from other sensations that reminded them of protection and care from a person.

"I find … people's faces very difficult, so when you kept saying about faces, I just wanted to hit it when it was coming towards me,… instead of focusing on those things, I remember them [someone else] holding me and I liked that person …, so I tried to remember that sensation and that scenario helped."
(Participant 23)

Theme 3: Practical suggestions on improving engagement

When the groups were asked what they would suggest in order to help improve the experience and engagement with the CFI, a number of participants suggested including multisensory elements. These suggestions included visual cues that included soft toys, blankets or a picture of a baby. Some people suggested including smells as a powerful way to help people to focus on compassion. Some people felt that extending compassion towards themselves was too much of a "big jump" and preferred to practice being compassionate to others as a starting point.

Some people felt that practicing the exercises within a group worked well because they felt connected to others rather than isolated with their difficulties with developing CFI.

"I think a group would be better because you would get that bit of validation that you are not alone. Especially the first time around, I got really upset because I thought "what kind of a useless person am I that I can't even imagine someone being kind to me", I got really upset, but then hearing you say "I struggled as well" was quite nice, and reassuring." (Participant 15)

Others felt more unsafe within a group and said that they would prefer such an intervention one to one with a therapist.

"the shame and nerves around people, yeah that [is less in] 1:1." (Participant 35)

"I would need a lot of support to practice this and I don't like being upset in front of other people, so I think I just wouldn't do it in a group, I would just say I would not do it." (Participant 14)

In addition to the reminder text messages to practice CFI, those that completed the follow up also added other practical strategies that they felt helped them to practice the exercises throughout the week. These included intentionally building in slots of free time in the day, setting up additional reminders as well as recording and personalising the CFI script.

"I put a reminder on my phone morning and night before and after the kids was in bed so had peace." (Participant 29)

"I recorded the visualisation onto my computer and amended it slightly so that it did not contain the prompts to imagine the face of the person as I found this distressing. In this way I perhaps prevented any intrusive feelings." (Participant 24)

Others who persisted with the exercises for a week indicated that they would have benefited more from practicing CFI with greater support to manage difficult intrusions that were triggered.

"I think I would need to practice with my individual therapist and also to be coached in ways to tolerate or bypass the intrusive negative images and associated emotions. If I had actually been able to master the technique I think I would practise it regularly as it seems very useful." (Participant 47)