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**THE IMPACT OF CHILDHOOD SEXUAL ABUSE ON ATTACHMENT AS DEFINED
BY THE ADULT ATTACHMENT INTERVIEW**

Major Research Project & Clinical Research Portfolio

Part One

(Part two bound separately)

Erin F. Toal

Academic Unit for Mental Health and Wellbeing

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Partial fulfilment of the requirements for the degree of

Doctor of Clinical Psychology

January 2014



**University
of Glasgow**

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VOLUME I

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CHAPTER 1

SYSTEMATIC REVIEW

Title: The Impact of Childhood Sexual Abuse on Attachment as Defined by the Adult Attachment Interview.

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Appendix 1.1)*

Abstract

Background – There is evidence that survivors of childhood sexual abuse (CSA) are significantly at risk of a wide range of medical, psychological, behavioural, and sexual disorders. CSA is linked to disorganised attachment, which is a risk factor for adult psychopathology. To date there has been no systematic review or meta-analysis examining the relationship between CSA and Adult Attachment. *Method* – A systematic search was conducted using Google Scholar, OVID MEDLINE R, EMBASE, PsychArticles, PsychINFO and CINAHL. Key journals were hand searched in addition to specialist journals in the field (Development and Attachment & Development and Psychopathology). Articles were screened for inclusion through scrutiny of titles and abstracts, with a detailed review being conducted on those retrieved for inclusion to ascertain eligibility. *Results* - Nine studies consisting of 7 participant samples were eligible for review. These studies comprised of a total of 399 participants with 221 (55%) having reported experiencing CSA. Of those who reported CSA, Adult Attachment Interview (AAI) distribution data was available for 118/221 (43%) individuals. Of the 118 participants who reported CSA and for which AAI distribution data were available, 33 (28%) showed an organised attachment SoM (i.e. they were given a classification of F, Ds or E) and 85 (72%) showed an unresolved/disorganised SoM with respect to attachment. Further, the review explored attachment states of mind and other clinical variables and risk of bias with regards to the findings. *Discussion* – Limitations were considered in terms of e.g. sampling, how the AAI was applied, limitations of the AAI itself and the focus on only one form of trauma given CSA elevates the risk for co-occurring trauma, maltreatment and loss. The generalisability of the data was discussed and the importance regarding the implications for further research.

Introduction

Attachment Theory and the Strange Situation Procedure (SSP)

Attachment theory (Bowlby, 1969, 1973, 1980) is an evolutionarily grounded lifespan model (Main, Hesse & Kaplan, 2005) that emphasises the importance of early caregiving relationships in the development of affect regulation, interpersonal functioning and adaptation to stressful life experiences. Over time external relationships become internalised. These Internal Working Models (IWM's) guide our responses to stressful life events (Bowlby, 1969, 1973, 1980). Repeated experiences of caregivers' sensitivity and responsiveness to distress in early life is key in the development of secure IWMs that enable flexibility of response to later stressful life events (Bowlby, 1980; Weiss, 1982; Ainsworth, 1989). In secure attachment the caregiver provides the infant with a safe haven where the infant comes to experience the caregiver as a source of comfort, restoring feelings of security in response to distress. These affectively attuned interactions offer the infant a secure base for exploration (Bowlby, 1988). Together, the safe haven and secure base offer psychological security – security in attachment and in exploration, confidence in others and confidence in the self (Grossman et al., 2008).

Infants' IWMs are typically inferred from observing them engaged in dyadic interactions with their caregivers in the SSP (Ainsworth, Blehar, Waters & Wall, 1978). This procedure examines infant attachment behaviour during increasing levels of stress provocation arising from separation and reunion of infant and caregiver, with or without the presence of a stranger. Observations of infants' responses have revealed three discrete patterns of attachment organisation. Secure infants will use their caregiver as both a safe haven and secure base when stressed, derive comfort from such proximity and reengage in exploration once they have been comforted. These infants possess IWMs of their caregivers as available,

responsive and sensitive to their attachment and exploratory needs (Ainsworth et al., 1978; DeWolff & van IJzendoorn, 1997; Lyons-Ruth & Jacobvitz, 1999). Using this procedure, the majority of infants have been found to be securely attached (Fox, Kimmerly & Schafer, 1991).

Insecure infants are blocked from using their caregivers successfully as safe havens and/or secure bases (DeWolff & van IJzendoorn, 1997; Lyons-Ruth & Jacobvitz, 1999). Attachment insecurity is subdivided into avoidant and ambivalent attachment states. When stressed avoidant infants do not seek proximity to their caregiver. These infants possess IWMs of their caregivers as inaccessible or dismissive and therefore do not attempt to use them as a safe haven. The infant deactivates their attachment needs as a means of regulating emotional distress (Ainsworth et al., 1978; Allen, 2013). This pattern of attachment has been found in 25% of infants (Fox et al., 1991). Those infants who possess IWM's of their caregivers as inconsistently unresponsive, seek proximity to increase the likelihood they will be responded to sensitively. The infant becomes preoccupied with the relationship and hyperactivates their attachment needs, which is intermittently effective in evoking caregiver responsiveness. Despite the desire for proximity, attachment remains ambivalent and the infant is unable to feel comforted or soothed (Ainsworth et al., 1978; Allen, 2013). Approximately 10% of infants use this attachment strategy (Fox et al., 1991).

Main and colleagues later added a fourth disorganised attachment category to explain 'anomalous' infant behaviour observed in the SSP (Main & Soloman, 1986, 1990). This atypical pattern was discovered to originate in maltreatment and is observed in infants whose caregivers have experienced high levels of trauma or loss (Main & Solomon, 1986). Disorganised infants display conflicting approach and avoidance behaviours, which often mirrors the caregiver's disorientated/disorientating and frightened/frightening manner. These infants face a paradox where the primary caregiver is both a source of safety and a source of threat simultaneously (threat without solution). Therefore these infants can often demonstrate

unintegrated and contradictory IWMs of their caregiver as both a source of threat and protection. van IJzendoorn, Schuengel and Bakermans-Kranenburg (1999) suggested around 15% of infants show this attachment pattern.

Attachment Theory and the Adult Attachment Interview (AAI)

The attachment categories identified from the SSP map on to adult attachment representations using the AAI (George et al., 1987). Investigations of Infant Strange Situation classifications and parental AAI attachment classifications find approximately 80% correspondence (Main, Kaplan & Cassidy, 1985; Ainsworth & Eichberg, 1991; Fonagy, Steele & Steele, 1991; van IJzendoorn, 1992; Zeanah et al., 1993). The AAI is a semi-structured interview, which elicits thoughts, feelings and memories about early attachment experiences and their influence on development into adulthood. The interview actively incorporates the exploration of attachment related events including experiences of threat (physical and sexual abuse), illness, separation and loss. It assesses the individual's current state of mind (SoM) with respect to attachment by assessing the strategies used to organise discourse around attachment related events, feelings and memories. The AAI was originally developed to predict the quality of the infant-caregiver attachment relationship, as observed in the SSP, and to predict caregivers' responsiveness to their infant's attachment signals (van IJzendoorn, 1995). The AAI scoring system assigns a 3-way classification of three primary attachment states of mind: Freely autonomous and Secure (F), Dismissing (Ds) and Preoccupied (E). The three categories reflect narratives that show a singular organised strategy for organising attachment related thoughts, feelings and memories (Kobak et al., 1993; Main, 1995).

Secure speakers tend to value attachment relationships and experiences, demonstrating appropriate objectivity when reflecting on any given attachment relationship and its influence. Autonomous (or secure) attachment is expressed by an open, coherent,

consistent and reasonably fluent discourse about childhood experiences (whether positive or negative) with primary attachment figures. Secure individuals seem at relative ease when discussing such experiences. General descriptions of relationships with primary attachment figures are supported with specific memories (Main, Goldwyn & Hesse, 2002).

Dismissing (avoidant) speakers tend to produce discourses that are incoherent, evidenced by an inconsistent representation of experience. They attempt to divert focus away from discussion around attachment relationship and experience history. They may describe a childhood that was positive, although such attempts are usually unconvincing. They may also allude to negative attachment experiences but maintain that such experiences have not negatively impacted on their ability to develop personally. Dismissing individuals place value on independence and minimise a desire for intimacy. In some cases dismissing speakers may actively derogate attachment relationships (Bowlby, 1969, 1973, 1980; Main et al., 2002).

Preoccupied speakers speak about attachment experiences in an incoherent manner, confusing past and present relationships indicating a lack of perspective and enmeshment with primary attachment figures. They tend to be rigidly focused on attachment figures or attachment-related experiences and are over-involved and dependent in relationships (Bowlby, 1969, 1973, 1980; Main et al., 2002).

The addition of the 4-way classification includes these organised attachment States of mind but also an additional Unresolved (U) classification. Unresolved SoM reflects a breakdown of attachment related discourse in relation to either discussions regarding loss (through death, coded as U_{loss}) or trauma (which can include a range of traumatic life experiences such as physical abuse and sexual abuse coded as U_{trauma}). This is thought to reflect absorption or intrusion of a memory or belief system that has not been integrated with present day life (Main et al., 2002). More recently a new and emerging fifth category has been identified (Cannot Classify (CC)), which reflects narratives that contain two or more

contradictory attachment related discourses within a single text (e.g. Preoccupied and Dismissing) (Main et al., 2002).

The Impact of Life Experiences on Attachment Classification

Attachment classifications from the SSP at 12 months have been found to correspond to AAI attachment classifications at ages 19 (Main et al., 2005), 20-21 (Waters et al., 2000), 21-22 (Crowell & Waters, 2005) and 26 (Sroufe et al., 2005). However the correspondence between infant and later attachment classifications in these studies is not perfect and highlights that scope for change exists. Consistent with this, Mikulincer and Shaver (2007) report only a moderate degree of stability in attachment patterns from infancy to adulthood and a moderate to high degree of stability throughout the adult years. Thus the developmental trajectory of attachment is not linear or simple.

Both positive and negative life experiences have an important impact on attachment security. Transitioning from security to insecurity has been linked with significant life stressors such as death of a parent, life threatening illness in child or parent, and divorce (Main et al., 2002). Transitioning from insecurity to security has been linked with positive experiences such as the influence of new emotional relationships (Bowlby, 1969, 1973, 1980), parent-infant interventions (Belsky & Fearon, 2008) and psychotherapy (Sroufe et al., 2005). These positive events (or combination of events) enable individuals to reflect on and reinterpret the meaning of past and present experiences, providing the opportunity to modify and update IWMs to guide interpersonal learning.

A major risk factor for the development of disorganised or insecure attachment is the experience of abuse. Specifically, the experience of Childhood Sexual Abuse (CSA) can have a significant impact on the attachment system. It provokes disorganisation of the individual's confidence in others challenging their model of self as well as model of others.

The violation in the young person's sense of relatedness can lead to a lack of trust and estrangement from others and difficulties in interpersonal functioning in adulthood (Harter, Alexander & Neimeyer, 1988). Thus CSA can disrupt the normal developmental processes of learning to trust and the formation of stable and secure relationships with others (Parkes & Weiss, 1983; Briere, 1992; Janoff-Bulman, 1992). Moreover the abuser's exploitation of the individual's attachment system in a way that is seductive also undermines their freedom and autonomy to explore the world. This missed opportunity for interpersonal learning blocks the possibility for disconfirmation of insecure or disorganised IWMs through benevolent interactions with others (Grossman et al., 2008).

There is a growing body of research evidence highlighting the significant effect CSA can have on the attachment system (e.g. Parkes & Weiss, 1983; Harter, Alexander & Neimeyer, 1988; Briere, 1992; Janoff-Bulman, 1992; Grossman et al., 2008). Despite this, there has been no systematic review exploring the association between CSA and later adult attachment as measured by the AAI. A systematic review exploring the impact of CSA on attachment as defined by the AAI was therefore proposed. Traditionally self-report measures have been used to measure adult attachment however evidence suggests the AAI is a more reliable overall measure of attachment organisation (Riggs, Jacobvitz & Hazen, 2002). For example, it has been shown in studies of attachment that individuals who are insecure in their attachment self-report as being secure, which is a particular feature of avoidant (insecure) attachment (Riggs et al., 2007). This kind of information may therefore not become accessible unless a clinically oriented interview such as the AAI is conducted (De Hass, Bakermans-Kranenburg & van Ijzendoorn, 2001). Self-report methods of attachment will therefore not be considered in this review and the AAI will be chosen as the narrative based method that measures the attachment SoM of individuals who have experienced CSA.

Aims

To this end, the primary aim of this systematic review was to synthesise and discuss the findings with regards to the associations between CSA and attachment states of mind as measured by the AAI. The secondary aims were to (a) consider any conceptual problems that may affect interpretation of findings; (b) explore the underlying mechanisms of attachment that mediate the effects of CSA and (c) explore what the findings might tell us about the potential factors mediating the effects of CSA on subsequent attachment states of mind.

Methods

Search Strategy

A preliminary search was conducted to ascertain whether a systematic review with the same aim had already been carried out. The Cochrane Database of Systematic Reviews was consulted and none were identified. Articles for review were identified by searching the following databases: OVID MEDLINE R (until August week 2 2012); EMBASE (until week 32 2012); PsychArticles (EBSCO host, until week 32, 2012); PsychINFO (EBSCOhost, until week 32 2012) and CINAHL (until week 32, 2012).

An appropriate scope for the search was reached after a process of refinement via addition and amendment of search terms. Initial searches explored the literature using a variety of terms. The search terms 'Abuse', 'Assault', 'Trauma', 'Sexual Assault' and 'Sexual Abuse' were each combined with the search terms 'Attachment', 'Attachment Style', 'Attachment Theory' and 'Adult Attachment Interview' using AND. This resulted in the identification of many studies that were relevant but in many instances did not meet inclusion criteria. When the search terms 'Sexual Abuse' and 'Adult Attachment Interview' were combined using 'AND' a high degree of precision was achieved, which missed very few studies. Limits were then imposed on these two terms to further refine the scope and ensure

quality: databases were de-duplicated; searches limited to peer-reviewed articles; searches limited to human studies; searches limited to adult studies. Study eligibility was ascertained by reading titles and abstracts and applying the inclusion and exclusion criteria. The criteria detailed below were used to establish relevant papers for review:

Inclusion Criteria

1. Studies published in English.
2. Studies reporting participants with a history of CSA.
3. Studies measuring attachment using the AAI.
4. Studies reporting the AAI SoM for those participants who have experienced CSA.

Exclusion Criteria

1. Studies reporting rates of CSA but where distribution of AAI for that sub-group of participants is not reported.
2. Studies not published in a peer-reviewed publication (e.g. conference abstracts and book chapters).
3. Single case studies.
4. Qualitative studies.
5. Studies only using a self-report measurement of attachment.
6. Studies using a narrative measure of attachment other than the AAI.

Coding frameworks for the AAI

The HH Coding Frame

Two additional coding systems developed specifically for the AAI have been developed. The HH coding framework was developed to aid understanding of, and elaborate on specific, AAI subcodings of ‘Dismissing derogation of attachment’, ‘fearfully preoccupied with attachment related experiences’ and ‘Cannot Classify’. Although these attachment states of mind are relatively rare in population based studies, they have been identified in clinical samples often containing participants who have experienced trauma. The HH measure addresses the extent to which an individual mentally represents attachment figures in opposing ways (hostile and helpless) and signs of the participant identifying with these characteristics in their caregivers (Main et al., 2002; Lyons-Ruth, Melnick, Patrick & Hobson, 2007). A score of 5 and above on a scale of 1 to 9 is required to be classified as HH with individuals e.g. laughing at painful attachment related experiences, making recurrent references to fearful affect and globally devaluing a caregiver (Lyons-Ruth, Yellin, Melnick & Atwood, 2003).

The Reflective Functioning Coding Frame

Second, the reflective functioning (RF) 11 point scale was developed to evaluate mentalisation quality in attachment relationships. RF assesses the extent to which individuals show active reflection of their own and others’ mental states during attachment related discourse (i.e. intentions, feelings, thoughts and desires). When scoring RF, raters note the presence and frequency of reflective statements within the discourse. RF scores range from -1 (negative RF, e.g., rejection of reflection e.g. “How would I know how they felt, you’re the psychologist”), 0 (absence of RF) to 9 (exceptional RF, e.g. complex reasoning regarding

mental states) with 5 representing normative RF abilities (Fonagy, Target, Steele & Steele, 1998).

Quality Evaluation

A checklist comprising the methodological quality rating scale was developed by the author based on existing checklists and guidelines (CONSORT, Clinical Trials Assessment Measure & PRISMA Checklist) (Altman et al., 2001; Tarrier & Wykes, 2004; Boutron, et al., 2008; Moher et al., 2009) (see Appendix 1.2).

Reliability of Quality Rating

Quality rating of 50% of included studies was conducted by the author and an independent reviewer (also a clinical psychology trainee, ER). Agreement on each of the individual item scores between the two raters reached 90%. Disagreement was resolved and 95% agreement was reached.

Results

Outcome of Search Process

The selection and exclusion process is illustrated in Figure 1. The initial search generated 117 papers. After applying the exclusion and inclusion criteria to titles and abstracts, 19 papers remained. In order to check the sensitivity of the search strategy, reference lists of these articles were screened by the author and reviewed by another clinical psychologist (AG) to ensure no studies were overlooked. This yielded an additional 6 potential articles. Reference lists of relevant reviews in the field were also hand searched and resulted in the identification of 1 potentially relevant article. Specialist journals in the field were also hand searched (Development and Attachment & Development and Psychopathology), which led to 3

potential articles being identified. This resulted in 29 articles, which were read in order to assess criteria for inclusion and exclusion. This resulted in 20 being excluded, leaving 9 articles. Where there was uncertainty as to the suitability of articles for inclusion in the review, the author reviewed the articles in full with a clinical psychologist (AG) to ascertain eligibility. The search was re-run at a later date (26th March 2013), which did not yield any additional papers.

Insert Figure 1 Here

Summary of Included Studies

Nine studies consisting of 7 participant samples were eligible for review (Stalker & Davies, 1995, 1998; Lyons-Ruth et al., 2003, 2005 used the same sample pool). These studies comprised of a total of 399 participants with 221 (55%) having reported experiencing CSA. An additional 54 (14%) participants reported having experienced both CSA and physical abuse (PA) (Lyons-Ruth et al., 2003, 2005; Bailey, Moran & Pederson, 2007; Pierrehumbert et al., 2009). Of those who reported CSA, AAI distribution data was available for 118/221 (43%) individuals (Stalker & Davies, 1995, 1998; Bailey et al., 2007; Pierrehumbert et al., 2009; Madigan et al., 2012) and HH data was available for 9/221 (8%) individuals (Lyons-Ruth et al., 2003, 2005). No RF data was reported in any of the studies.

Participants ranged in age from 15 to 62 (Mean=29 years) (Stalker & Davies, 1995, 1998; Stovall-McClough & Cloitre, 2006; Bailey, Moran & Pederson, 2007; Alexander, 2009; Pierrehumbert et al., 2009; Madigan et al., 2012). Two studies investigated an adolescent sample (Bailey et al., 2007; Madigan et al., 2012). Data on gender were available for all 399 participants. All participants were female. Six of the 9 studies were cross-sectional in nature (Stalker & Davies, 1995, 1998; Stovall-McClough & Cloitre, 2006; Alexander., 2009;

Pierrehumbert et al., 2009; Madigan et al., 2012) with the remaining 3 being longitudinal birth cohort studies (Lyons-Ruth et al., 2003, 2005; Bailey et al., 2007). Four studies were made up of high risk samples (Lyons-Ruth et al., 2003, 2005; Bailey et al., 2007; Madigan et al., 2012), 2 clinical samples (Stalker & Davies, 1995, 1998; Stovall-McClough & Cloitre, 2006) and 1 comprised of both a clinical and normative participant sample pool (Pierrehumbert et al., 2009). Table 1 provides a summary of the included studies and details the associations between CSA and AAI.

Insert Table 1 Here

CSA and Attachment States of Mind

CSA and AAI Distribution Data

Table 1 shows that only 5 studies reported directly on AAI distribution data for participants reporting CSA. Pierrehumbert et al. (2009) reported on AAI distribution in terms of organised SoM (F, Ds and E) and unresolved/disorganised SoM (U). Stovall-McClough and Cloitre (2006) and Bailey et al. (2007) reported on overall AAI U status but did not break this down further. Only Stalker and Davies (1995, 1998) carried out a full 3, 4 and 5 Way Analysis of AAI Codings (see table 2), as well as providing a breakdown of AAI Unresolved status (U_{loss} , U_{abuse} and $U_{\text{abuse \& loss}}$).

Overall then, of the 118 participants who reported CSA and for which AAI distribution data were available, 33 (28%) showed an organised attachment SoM (i.e. they were given a classification of F, Ds or E) and 85 (72%) showed an unresolved/disorganised SoM with respect to attachment. Furthermore, 24/85 (28%) classified as having an unresolved/disorganised SoM were given a U_{loss} , U_{abuse} or $U_{\text{abuse \& loss}}$ classification. Nine

(22.5%) were found to be unresolved for abuse, 7 (17.5%) for loss and 8 (20%) for both abuse and loss. Pierrehumbert et al. (2009) also further explored participants' U status. Fifteen of the 17 (88%) who reported experiencing CSA scored higher on the scale measuring AAI U status for abuse compared with loss.

Association between CSA and AAI U Status

Three studies explored the association between CSA and overall AAI U status (Bailey et al., 2007; Pierrehumbert et al., 2009 & Madigan et al., 2012). Pierrehumbert et al. (2009) found the CSA group had significantly higher levels of AAI U classification than the control group, although they did note 6 of their control participants had experienced CSA, which may have impacted on their findings ($\chi^2 = 4.98, p = 0.03$). Madigan et al. (2012) found a CSA history was associated with an overall AAI U classification ($\chi^2 = 11.46, p < .001$) as well as a classification of unresolved for loss ($\chi^2 = 3.52, p < .05$) and unresolved for abuse ($\chi^2 = 6.03, p < .01$). Similarly Bailey et al. (2007) found that in addition to CSA being associated with overall AAI U status ($\chi^2 = 16.04, p < .0001$), CSA was also associated with unresolved for loss ($\chi^2 = 5.56, p < .01$) and marginally associated with unresolved for abuse ($\chi^2 = 3.77, p < .10$).

In contrast, using a regression analysis Lyons-Ruth et al. (2003, 2005) did not find a direct association between CSA and AAI U status. When they compared those who had experienced CSA with those who had not experienced CSA, they found no direct association between CSA and AAI U ($\beta = .11, p > .05$) or CC ($\beta = .02, p > .05$) status. However, they found a significant association with Hostile Helpless (HH) SoM ($\beta = .48, p < .05$). The CSA group were more likely to be given a HH classification ($\beta = .41, p < .05$). Specifically, they found they were significantly more likely to recurrently laugh at pain ($\beta = .61, p < .01$) and experience ruptured attachments in adulthood ($\beta = .47, p < .05$). These findings suggest that this lack of direct

association between CSA and Attachment SoM may be accounted for by particular types of affect regulation strategies, which aim to dismiss or minimise painful experiences.

CSA and 'Inferred' Attachment Experiences

Finally only one study explored to what participants' 'inferred' attachment experiences. Inferred attachment experiences are coded during the process of coding participants overall attachment SoM. Alexander (2009) found a significant association between CSA and parental role reversal on the AAI: role reversal with father, $F(1,53)=7.07$, $p=.01$; role reversal with mother, $F(1, 61)=6.58$, $p=.013$.

Conceptual Problems

When evaluating the evidence of an association between CSA and adult SoM with respect to attachment there are a number of factors that complicate interpretation of these data and therefore need to be considered when drawing conclusions.

1) Co-occurrence of CSA with other trauma

Seven studies assessed for the possibility that CSA may co-occur with other forms of abuse (Lyons-Ruth et al., 2003, 2005; Stovall-McClough & Cloitre, 2006; Bailey et al., 2007; Alexander, 2009; Pierrehumbert et al., 2009; Madigan et al., 2012). Two studies did not assess for such a co-occurrence (Stalker & Davies, 1995, 1998). Three studies explicitly looked at the relationship between CSA with other forms of abuse and its impact on attachment (Bailey et al., 2007; Alexander, 2009; Madigan et al., 2012). Four studies provided rates of CSA and other forms of abuse in their participant samples (Lyons-Ruth et al., 2003, 2005; Bailey et al., 2007; Alexander, 2009; Madigan et al., 2012). Bailey et al. (2007) found 21/62 (34%) had experienced sexual abuse and 12 (19%) both physical and sexual abuse.

Lyons-Ruth et al. (2003, 2005) found 9/45 (20%) had experienced sexual abuse and 5/45 (11%) both physical and sexual abuse. Madigan et al. (2012) found 30/51 (59%) of their sample reported CSA, 43/51(84%), physical abuse, 30/51(59%) emotional abuse and 45/51 (88%) neglect. Alexander (2009) found 33/93 (36%) had experienced sexual abuse, 48/93 (52%) experienced abuse by mother, 32/93 (34%) experienced abuse by father and 54/93 (58%) witnessed Inter-Partner Violence (IPV).

The Relationship between CSA and Other forms of Abuse and the Association with Attachment

With regards to the relationship between CSA with other forms of abuse and the association with attachment, Bailey et al. (2007) carried out binary logistic regressions to determine the relative contributions of PA, CSA and general maltreatment to the prediction of AAI U status. They found that CSA but not physical abuse history uniquely predicted AAI U status ($\beta=2.17, p<.01$ v $\beta=0.64, p>.05$) (Nagelkerke $R^2=0.33$). With the general maltreatment variable added as the third predictor variable, neither CSA or PA predicted AAI U status ($\beta=0.31, p>.05$ v $\beta=-.08, p>.05$); however general maltreatment emerged as an independent predictor ($\beta=.08, p<.05$) (Nagelkerke $R^2=0.44$). They also found that CSA but not PA was related to U_{loss} ($\beta=1.69, p<.05$ v $\beta=-.44, p>.05$). With the general maltreatment variable added, they found that it was related along with CSA, but not PA to U_{loss} ; however neither variable independently predicted U_{loss} after controlling for their shared variance ($\beta=-.58, p>.05$ v $\beta=.05, p<.10$ v $\beta=-1.98, p>.05$). Finally they found that neither physical nor CSA independently predicted U_{abuse} although the latter approached significance ($\beta=-.11, p>.05$ v $\beta=.05, p>.10$)(Nagelkerke $R^2=0.16$). With the general maltreatment variable added it was found to uniquely predict U_{abuse} and the PA and CSA variables remained non significant ($\beta=-.11, p<.01$ v $\beta=2.46, p>.05$ v $\beta=2.04, p>.05$) (Nagelkerke $R^2=0.51$). The findings indicate that life events are not independent and that CSA highlights the risk of co-occurring trauma, maltreatment and

loss in individuals' development.

Madigan et al. (2012) found that CSA uniquely predicted overall AAI U status ($\beta=2.96$, $p<.01$) (Nagelkerke $R^2=0.32$). However contrary to Bailey et al. (2007), Madigan et al. (2012) found that when general maltreatment experiences was added as a second predictor, it did not emerge as a significant independent predictor, over and above CSA, in the prediction of overall AAI U status ($\beta=.02$, $p>.05$ v $\beta=2.47$, $p<.05$). An examination of odds ratios further illustrates this finding showed that participants with a history of CSA were approximately 19 times more likely to have an overall AAI U classification (Odd's ratio=19.33(2.26-165.64).

Alexander (2009) also examined the impact of CSA with other forms of abuse on attachment and the vulnerability of such environmental exposure to experiencing multiple revictimisation in adulthood. Participants with multiple abusive relationships in adulthood were significantly more likely to report having been sexually abused as a child ($\chi^2 = 10.38$, $p <.05$) and having witnessed IPV as a child ($\chi^2=17.32$, $p <.01$). Post hoc analyses indicated that participants multiply victimised in adulthood were also significantly more likely to have experienced multiple forms of trauma (including CSA, witnessing IPV, abuse by father and abuse by mother) ($F(1,91)=16.80$, $p<.001$). Participants who were classified as unresolved with regard to childhood abuse and loss were significantly more likely to report multiple abusive relationships ($\chi^2=5.30$, $p <.021$). In post hoc analyses, participants who were unresolved described more father-child role reversal ($F(1,53)=15.32$, $p<.001$), mother-child role reversal ($F(1,61)=13.71$, $p<.001$), witnessing IPV in childhood ($F(1,64)=6.00$, $p=.017$), and multiple forms of childhood trauma ($F(1,65)=5.29$, $p=.025$). Multiple abusive relationships in adulthood interacted with unresolved attachment ($F(1,62)=7.03$, $p=.01$) to predict passivity of thought on the AAI.

2) Method of Reporting AAI Findings

CSA and AAI U Status

Five studies reported solely on Unresolved SoM. (Lyons-Ruth et al., 2003, 2005; Stovall-McClough & Cloitre, 2006; Bailey et al., 2007; Madigan et al., 2012). Three studies investigated unresolved SoM with respect to CSA (Stovall-McClough & Cloitre, 2006; Bailey et al., 2007; Madigan et al., 2012). Two studies looked at both unresolved and cannot classify SoM with respect to CSA (Lyons-Ruth et al., 2003, 2005). Only 3 studies reported on both organised and disorganised SoM and associations with CSA (Stalker & Davies, 1995, 1998; Pierrehumbert et al., 2009). One study discussed what participants' inferred from early attachment experiences but did not go on and explore associations with attachment SoM and subsequent major AAI classification (Alexander, 2009).

Distinction between an Inferred Experience of CSA and AAI Attachment Classification

Only 2 of the 9 studies reported findings, which highlighted the distinction between an inferred experience of CSA and subsequent SoM in relation to such an experience on the AAI (Stovall-McClough & Cloitre, 2006; Pierrehumbert et al., 2009). Pierrehumbert et al. (2009) found no significant differences between AAI organised (F, Ds & E) and AAI U status within the CSA group on characteristics of abuse. Consistent with this, Stovall-McClough and Cloitre (2006) found that CSA severity, extent (combination of duration & frequency) and number of perpetrators did not predict AAI U_{abuse} status.

The Protective Impact of Attachment for participants with a CSA history

Only 3 studies looked at the potential protective impact of attachment for participants with a CSA history. Bailey et al. (2007) found that AAI U_{abuse & loss} SoM

significantly mediated the association between CSA and relationship problems. Stalker and Davies (1995, 1998) and Pierrehumbert et al. (2009) found that 23/40 (57.5%) and 14/27 (52%) participants with a CSA history had some meaningful relationships. However, Pierrehumbert et al. (2009) did not break this down by AAI attachment status. Stalker and Davies (1995, 1998) reported that participants' competence in interpersonal relating did not differentiate between attachment groups, although they did not go on to detail the actual analyses. They stated that the small sample size within the organised primary attachment classification groups made interpretation of statistical analysis tenuous.

3) Rates of U, E and CC AAI Classifications

Two studies using the same sample pool provided a breakdown of AAI distribution data for organised SoM (F, E and Ds) (Stalker & Davies, 1995, 1998). They found that the majority of participants were classified as E (n=27/40; 67.5%). Of the 24/40 (60%) classified as U, 14 of these 24 (58%) were given a best fitting alternative classification of E. This contrasts with the comparatively low rates of F (5/40; 12.5%) and D (5/40; 12.5%). Furthermore of those classified as U, none were given an alternative classification of F and only 1/40 (4%) was given an alternative classification of D. The remaining 9/24 (37.5%) were classed as CC. When CC was collapsed into the organised categories 7/40 (17.5%) were assigned to a primary E and 2/40 (5%) to a primary Ds.

Correlates of CSA

1) Parenting behaviour

CSA, AAI Attachment Classifications and their Associations with Parenting Behaviour

Four studies recruited mothers who had experienced CSA (Lyons-Ruth et al., 2003, 2005; Bailey et al., 2007; Madigan et al., 2012). Only 2 of the 4 studies, however, looked at subsequent associations with parenting behaviour (Lyons-Ruth et al., 2003, 2005). Lyons-Ruth et al. (2003, 2005) found that AAI U or CC status was not related to the level of infant disorganised attachment behaviour. However, a multiple regression analysis on level of infant disorganised behaviour confirmed that a maternal HH state of mind ($\beta=.36, p<.02$) explained a significant proportion of the variance in infant disorganisation not accounted for by AAI U or CC status ($\beta=-.13, p>.05$). Furthermore, Lyons-Ruth et al. (2003, 2005) found significant associations between maternal HH SoM and maternal disrupted communication with the infant (HH classification, biserial $r=.39, p<.03$), as well as an association between maternal disrupted communication and infant disorganisation ($r=.38, p<.03$).

Associations between Maternal Affective Communication, Maternal H/H SoM and Infant Attachment

Given these significant associations Lyons-Ruth et al. (2003, 2005) carried out a regression analysis to ascertain whether a possible mediational role of maternal behaviour in transmitting the influence of maternal H/H SoM to the infant would be supported. With HH SoM entered first into the equation, the relation between HH state of mind and infant disorganisation was found to be significant ($\beta=-.37, F(1,35)=5.43, p>.03$). In the second equation, after variance associated with maternal disrupted communication was accounted for

by entering it first into the equation, the relation between maternal HH state of mind and infant disorganisation decreased to non-significance ($\beta=.26$, $^{\wedge}F(1,34)=2.40$, $p<.13$), whilst the coefficient for disrupted communication was significant ($\beta=.38$, $F(1,35)=5.85$, $p<.02$). This supports the conclusion that the effect of maternal HH state of mind on infant attachment is mediated by maternal disrupted affective communication with the infant.

2) *Symptoms*

Three studies looked at participants' experience of CSA and the association with symptoms linking this in with AAI distribution data (Stalker & Davies, 1995, 1998; Bailey et al., 2007; Pierrehumbert et al., 2009).

CSA, AAI U Status and their Association with Complex Trauma Symptoms

Bailey et al. (2007) carried out a series of MANOVAs to ascertain whether CSA and unresolved attachment were associated with complex trauma symptoms. The omnibus test was significant for CSA (*Pillais'* $F(7,50)=3.87$; $p<.01$; *partial* $n^2=.35$), U_{abuse} status (*Pillais'* $F(7,50)=2.43$; $p<.05$; *partial* $n^2=.25$) and $U_{abuse \& \text{loss}}$ CSA (*Pillais'* $F(7,50)=3.71$; $p<.01$; *partial* $n^2=.34$). Following up on these significant findings, CSA was associated with higher levels of a broad spectrum of complex trauma symptoms, including dissociation (*Pillais'* $F(1,56)=12.11$; $p<.001$; *partial* $n^2=.18$), identity confusion, including both impaired self-reference (*Pillais'* $F(1,56)=8.12$; $p<.01$; *partial* $n^2=.13$) and identity problems (*Pillais'* $F(1,56)=4.10$; $p<.05$; *partial* $n^2=.07$), affective instability (*Pillais'* $F(1,56)=15.88$; $p<.001$; *partial* $n^2=.22$), and relationship difficulties (*Pillais'* $F(1,56)=11.12$; $p<.01$; *partial* $n^2=.17$). U_{abuse} status and $U_{abuse \& \text{loss}}$ were associated with higher self-reported dissociative symptoms (*Pillais'* $F(1,56)=5.94$; $p<.05$; *partial* $n^2=.10$ & *Pillais'* $F(1,56)=4.78$; $p<.05$; *partial* $n^2=.08$ respectively), and relationship problems (*Pillais'* $F(1,56)=9.46$; $p<.05$; *partial* $n^2=.14$ & *Pillais'*

$F(1,56)=22.62; p<.001$; *partial* $n^2=.29$ respectively). $U_{\text{abuse \& loss}}$ status was also related to greater identity confusion (impaired self reference) (*Pillais' F*(1,56)=7.39; $p<.01$; *partial* $n^2=.12$) and to inconsistent responding across items on the Trauma Symptom Inventory (TSI) (Briere, 1995) (*Pillais' F*(1,56)=6.57; $p<.05$; *partial* $n^2=.11$). Bailey et al. (2007) also examined whether CSA and unresolved status predicted traditional PTSD symptoms as indicated by intrusive experiences and defensive avoidance scores from the TSI scales (Briere, 1995). Omnibus tests were significant for CSA. CSA was significantly associated with higher levels of reported intrusive experiences (*Pillais' F*(1,56)=6.57; $p<.05$; *partial* $n^2=.11$). No forms of unresolved status (U_{abuse} , U_{loss} , $U_{\text{abuse \& loss}}$) were significantly associated with traditional PTSD symptoms.

Bailey et al. (2007) also carried out a series of regressions to evaluate whether unresolved status mediated the link between CSA and complex trauma symptoms. The complex trauma symptoms selected for measurement were dissociative symptoms, relationship difficulties and identity confusion, which was measured using the impaired self reference scale of the TSI (Briere, 1995). $U_{\text{abuse \& loss}}$ status was not found to mediate the link between CSA and dissociative symptoms ($z=.64$; $p>.10$; Adjusted R^2 for mediational model=.12) and identity confusion ($z=1.49$; $p>.10$; Adjusted R^2 for mediational model=.13) but was found to mediate the link between CSA and relationship difficulties ($z=2.90$; $p>.01$; Adjusted R^2 for mediational model=.30). Of note is that unresolved status was measured 4 years prior to participants' symptomology being noted.

Levels of Current Functioning for those with a CSA history

Stalker and Davies (1995, 1998) and Pierrehumbert et al. (2009) examined levels of current functioning using the Global Assessment Scale (GAS) (Endicott et al., 1976). Pierrehumbert et al. (2009) found 14/27 (52%) participants with a CSA history scored above

60 on the Global Assessment of Functioning scale (GAF) of the DSM-IV and Stalker and Davies (1995, 1998) found 23/40 (58%) CSA participants were assigned scores between 61 and 70. This indicates mild or no symptoms, and difficulties in social or occupational functioning. However Pierrehumbert et al. (2009) also found that 13/27 (48%) participants with a CSA history (and none of the controls) received scores equal or lower than 60 points on the GAF indicating moderate or more serious symptoms, and difficulties in social or occupational functioning. Stalker and Davies (1995, 1998) found the GAS scores for two CSA participants were below 40, indicating serious impairment, and the need for supervision to prevent harm to themselves. They did not find that the GAS scores differentiated between attachment groups (F, Ds, E and U) although the small number of participants assigned to the organised attachment groups as primary classifications makes statistical analysis tenuous. What they did find was that higher levels of self-other differentiation was associated with better levels of current functioning ($r=.30$, Signif. $F=.009$).

Associations between CSA and Symptoms of Depression, PTSD and Anxiety

Pierrehumbert et al. (2009) also examined associations between CSA and symptoms of depression, PTSD and anxiety. They found 13/27 (48%) participants with a CSA history had a current major depressive episode, 7/27(26%) a past major depressive episode and 8/27 (30%) PTSD as measured by the MINI International Neuropsychiatric Interview (MINI: Weiller, Amorim, Bonora, Lepine & Lecrubier, 1994). Participants with a CSA history were also found to score higher than the control group on the Dissociative Experiences Scale (DES: Bernstein & Putman, 1986; Carlson et al., 1993). Furthermore when presented with an experimental stress challenge (the Trier Social Stress Test (TSS), Kirschbaum, Pirke & Hellhammer, 1993) participants with a CSA history and overall AAI U status were found to

present with the highest levels of perceived stress and simultaneously most suppressed cortisol reactions.

To elaborate further, in the TSST, levels of perceived stress were assessed by means of a visual analogue scale (VAS: Folstein & Luria, 1973; Kirschbaum, Kudielka, Gaab, Schommer & Hellhammer, 1999) at 0, 35, 40 and 44 minutes (i.e. before participants entered the TSST examination room), 55 minutes (i.e. inside of the examination room), 60 minutes (i.e. after leaving the examination room), and 65 minutes. Saliva samples were collected to measure the stress hormone cortisol at 15, 44, 60 and 65 minutes before the TSST and 75, 85, 100 and 115 minutes after the TSST.

CSA participants with an unresolved classification presented the highest perceived stress responses, followed by CSA participants with organised attachment classifications and then control participants. Analysis of variance for repeated measures [3 points: before the TSST (baseline, at 35minutes), when perceived stress levels peaked (between 55-60 minutes) and after the TSST (recession, at 65 minutes)] showed a significant group effect ($F(2,34)=4.55$; $p=0.02$). The three groups (post hoc) were then compared on three variables: baseline, delta (peak minus baseline) and recovery (peak minus recession). Post hoc tests showed a significant difference between CSA participants classified as unresolved and controls on the perceived stress response (delta). There were no significant differences found at baseline or during recovery for any of the three groups.

Saliva samples were collected to assess cortisol levels in order to measure the physiological response to stress. CSA participants classified as unresolved had lower endocrine responses to the TSST, compared to controls and CSA participants with organised attachment classifications. The three groups were then compared on three variables: baseline (lowest point at 44-60 minutes), peak response (65-75 minutes) and recession (100-115 minutes). The analysis of variance for repeated measures showed no significant group effect

($F(2,32) = 1.29; p=0.29$). Groups were further compared on 4 variables: baseline, delta (peak minus baseline), recovery (peak minus recession), and the area under the curve. Post hoc tests revealed a significant difference between CSA participants classified as unresolved and controls, regarding the recovery after the TSST (Tukey post hoc test $p= 0.05$); concerning the area under the curve, the difference between the same groups expressed a statistical tendency (Tukey post hoc test $p=0.06$).

A regression analysis was then also conducted to examine the possible contribution of psychopathology in the association between cortisol responses and the unresolved classification. The scores of dissociation and global functioning were entered in a regression equation along with the variables of past depression, current depression, PTSD, unresolved attachment, and group, in order to predict the area under the curve of cortisol values (stepwise method). Only the variable unresolved remained in the model ($Beta=0.35$; $t=2.14$, $p=0.04$). The procedure was repeated after excluding 6 control subjects with some experience of CSA. The analysis produced similar results (Unresolved only remained in the model; $Beta=0.38$; $t=2.15$, $p=0.04$). Additional variables were entered into the regression characterising abuse (onset age, severity, chronicity of sexual abuse and the score for physical abuse), and finally tobacco consumption. None of the additional variables predicted the cortisol response.

Finally no correlations across participants between the variables of perceived stress and of physiological responses: correlation coefficients between VAS scores and salivary cortisol concentrations were, for the baseline $r=-.03$, for the delta $r=-.19$, and for the recovery $r=-.00$ ($n=35$).

Discussion

Summary of Included Studies Findings: CSA and AAI Distribution Data

The systematic review set out to identify and synthesise the literature exploring the association between CSA and Attachment SoM as measured by the AAI. Nine manuscripts describing 7 studies containing 399 female participants were identified using an extensive and systematic search strategy. Only 5 studies reported directly on AAI distribution data for participants reporting CSA. Of the 118 participants who reported CSA and for whom AAI distribution data were available, 33 (28%) showed an organised attachment SoM (i.e. they were given a classification of F, Ds or E) and 85 (72%) showed an unresolved/disorganised SoM with respect to attachment. Where unresolved status was explored further there was considerable overlap between U_{loss} and U_{abuse} suggesting significant co-occurrence of stressful attachment related life events. Furthermore, where the three-way AAI classification was used or forced, participants were most likely to show Preoccupied (E) SoM (see Table 1 for the AAI distribution data for included studies).

Summary of Included Studies Findings: Conceptual Problems and Correlates of CSA

The secondary aims were to (a) identify conceptual problems arising in the literature and; (b) explore other correlates of CSA. Experiencing CSA highlighted the risk for co-occurring trauma, maltreatment and loss in an individual's development and with this, increased vulnerability to experiencing multiple revictimisation in adulthood. There was also a tendency for studies to report solely on disorganised states of mind. This was true for 5 manuscripts describing 3 studies (Lyons-Ruth et al., 2003, 2005; Stovall-McClough & Cloitre, 2006; Bailey et al., 2007; Madigan et al., 2012). When the parenting behaviour of mothers who had experienced CSA was examined, maternal affective communication was found to

mediate the effects of maternal HH states of mind on infant attachment (Lyons-Ruth et al., 2003, 2005). CSA was also found to be associated with a range of difficulties in adulthood such as difficulty in interpersonal relations, depression, anxiety, PTSD and symptoms associated with complex trauma (Stalker & Davies, 1995, 1998; Bailey et al., 2007; Pierrehumbert et al., 2009). Two studies reported on Unresolved (U) classification and CSA in relation to difficulties experienced (Bailey et al., 2007; Pierrehumbert et al., 2009). Pierrehumbert et al. (2009) found individuals with a CSA history and overall AAI U status to present with the highest levels of perceived stress and simultaneously most suppressed cortisol reactions. Bailey et al. (2007) found U_{abuse} , and $U_{\text{abuse \& loss}}$ status to be associated with some symptoms of complex trauma and found $U_{\text{abuse \& loss}}$ status to mediate the effects between CSA and relationship difficulties. Although a range of difficulties were reported, 50 to 60% of individuals with a CSA history were also found to function well socially and occupationally and report some meaningful relationships (Stalker & Davies, 1995, 1998; Pierrehumbert et al., 2009). Moreover higher levels of self-other differentiation was associated with better levels of current functioning (Stalker & Davies, 1995, 1998).

Methodological Limitations

CSA and Method of Reporting AAI Distribution Data

A number of methodological limitations are discussed. Although 9 manuscripts detailing 7 studies met criteria for inclusion in the review, 5 manuscripts detailing 3 studies focused solely on disorganised attachment states of mind (Lyons-Ruth et al., 2003, 2005; Stovall-McClough & Cloitre, 2006; Bailey et al., 2007; Madigan et al., 2012). In addressing the primary aim of the systematic review this limits conclusions that can be made. As demonstrated from the 3 included studies that examined both organised and disorganised

attachment states of mind, experiencing CSA does not necessarily lead to disorganisation (Stalker & Davies, 1995, 1998; Pierrehumbert et al., 2009). It is not the content of individuals' experiences rather it is their current state of mind in relation to their experiences that determines attachment classification.

Assessing the Quality of Attachment Disorganisation

Moreover the limited use of 5 Way AAI analysis, which considers the full range of attachment states of mind defined by this tool, limits the ability to describe the quality of attachment disorganisation (Stalker & Davies, 1995, 1998). A related limitation is the limited use of the HH framework and lack of use of the RF framework. This could have further described the quality of the unresolved and preoccupied attachment states that were found to be prevalent in this review and how attachment representations can manifest, as well as capture a wider range of states of mind not yet defined by the AAI (see Table 1).

HH Coding Frame

Emerging evidence suggests that the HH codes delineate additional trauma-related ways in which a contradictory or pervasively unintegrated SoM can manifest on the AAI. It has therefore been suggested that these unintegrated states of mind are not fully captured by unresolved attachment states on the AAI, which in turn may erroneously lead to U classifications being assigned to transcripts rather than a HH classification (Lyons-Ruth et al., 2003, 2005). Such erroneous classifications to the preoccupied classification E3 is also possible and is assigned when individuals have had fearful experiences related to attachment with these experiences presently preoccupying or even directing mental processes (Main & Hesse, 2002; Lyons-Ruth et al., 2003, 2005). The studies included in this systematic review did not break the preoccupied attachment classification down further and it would be

interesting for future studies to investigate the rates of E3 within the preoccupied group of those with a CSA history.

RF Coding Frame

None of the studies included in the review used the RF framework. It has been theorised that the capacity to reflect on mental states (intentions, feelings, thoughts and desires) in the self and others, can be protective from long-term sequelae of trauma that is experienced. RF is thought to be a mechanism that is critical to the resolution of early traumatic experiences and psychological well-being in adulthood, with its optimum development arising from early attachment relationships based on security (Fonagy et al., 1998). Increased RF data may therefore help to test whether there is an association between trauma experience, resolution and mentalisation abilities. However the validity of the RF scale is under-developed and further investigation is needed (Choi-Kain & Gunderson, 2008).

It is anticipated applying HH and RF frameworks will therefore better capture the varied dynamics (should they exist) and ways individuals with a CSA history have adapted to them, which in turn will help understanding as to the developmental trajectories that lead to vulnerability or resilience to future stressful life events, as well as vulnerability to revictimisation in adulthood.

The High Proportion of At Risk and Clinical Samples

Regarding research design, the higher proportion of at risk and clinical samples may have led to insecure and disorganised attachment states of mind being over represented. Within the insecure category there was a low rate of those classified as dismissing (Ds) in their attachment. However since dismissing individuals tend to place value on independence and minimise feelings and relational bonds they would be less likely to seek help when distressed

compared to other groups. Moreover researchers attached to the included studies in this systematic review opted for convenience sampling when selecting participants. In doing this it led to the inclusion of only help seeking participants.

Sample Characteristics

All of the studies had small sample sizes and all participants were female. Perhaps more could be done to engage males with experience of CSA in research. Moreover there was a relatively young mean age of 29 years across included studies. Several of the papers presented demographic information, but it is difficult to make interpretations of the role of these as not all studies reported this information, or did not present the information specific to individuals with a CSA history.

CSA Characteristics

Regarding CSA characteristics, five studies describing four participant samples detailed this (Stalker & Davies, 1995, 1998; Stovall-McClough & Cloitre, 2006; Pierrehumbert et al., 2009; Madigan et al., 2012). The remaining studies did not (Lyons-Ruth et al., 2003, 2005; Bailey et al., 2007; Alexander, 2009). Two studies stipulated inclusion and/or exclusion criteria specific to the SA experience. Bailey et al. (2007) excluded experiences such as adult exhibitionism, being kissed on the mouth by an adult, or patted on the behind in a sexual way. They also excluded more intrusive contact experiences if they occurred with a perpetrator who was not an adult relative or caregiver. Pierrehumbert et al. (2009) required that the latest abusive episode to have occurred over 2 years prior to participation in the study. It would be helpful for future studies to be clear on how they have defined sexual abuse and to consider, more closely, the potential differential impact of CSA on Attachment SoM depending on the characteristics of the abuse. As Madigan et al. (2012) points out for example, in their sample

the majority of perpetrators of CSA were non-caregivers and some lack of resolution seen in the AAI may therefore not be attachment related. This raises the critical question as to what extent the AAI should assess attachment processes with regards to CSA, when the trauma occurred outside of the attachment relationship. A related consideration would be the use of retrospective self-report abuse information, which all studies included in the systematic review used as such information cannot be verified, which raises the issue of report biases in reporting of abuse.

Limitations of Current Review

The Quality Rating Scale and Inclusion/Exclusion Criteria

There are some limitations to the current review. The rating scale was devised to assess the quality of included studies for this review as no existing tool met the needs of this study. This may have led to ratings of included articles being at risk of bias. The generalisability of findings may have also been compromised by the exclusion and inclusion criteria, as this resulted in the exclusion of a large number of studies.

The Focus on One Form of Childhood Trauma

Regarding the primary question of this systematic review, the decision to focus on one childhood trauma was a potential limitation given experiencing CSA elevates the risk for co-occurring trauma, maltreatment and loss. This interdependence makes it difficult to isolate any one form of abuse and examine its impact on attachment. However by doing so, it enables the building up of a conceptual understanding as to the different developmental trajectories that can arise following abuse experiences and the underlying mechanisms that contribute to this. Despite attempts to examine, solely, the impact of CSA on attachment in this review, 2 of the 9

included studies did not indicate whether other forms of abuse had been enquired about or were adequately controlled for (Stalker & Davies, 1995, 1998).

Limitations of the AAI

Moreover although the AAI was included as the narrative based attachment measure there are several limitations of this tool. The AAI was originally developed for low risk samples and emerging evidence suggests it is not adequate to capture the range of states of mind among clinical groups (e.g. Lyons-Ruth et al., 2003, 2005). Regarding the current coding criteria for the Unresolved (U) SoM on the AAI, it was originally developed for loss experiences and only subsequently extended to abuse experiences. Current criteria for lack of resolution may therefore be more sensitive to processes involved in integrating loss rather than abuse (Lyons-Ruth et al., 2003, 2005). Moreover being classified as Unresolved (U) for abuse is also dependent upon a specific abuse experience being reported, as only aspects that can be linked to the SoM of participants with regards to experience are relevant to coding (Main et al., 2002). A related limitation is the lack of behaviourally phrased questions regarding sexual abuse in comparison to other maltreatment experiences on the AAI (Bailey et al., 2007; Madigan et al., 2012). This, combined with individuals who may be more reticent to report sexual abuse because sexual abuse itself tends to occur in a more secretive fashion, may lead to reduced rates of reporting such experiences in response to the AAI compared with other measures (Bailey et al., 2007). This is likely to compromise the potential for sexual abuse to be identified during the interview and coded for U status. It may also have the added effect of erroneous classification to the Ds Attachment SoM category, since these individuals tend to organise their discourse by minimising and avoiding engagement with painful attachment related episodes.

Exclusion of Self-Report Methodology

By selecting the AAI as the attachment measure for this systematic review it excluded data garnered from self-report methodology. Self-report measures enquiring directly about sexual abuse have been shown to result in increased identification when compared with the AAI (Madigan et al., 2012). This is an important point to consider given some of the included studies did not directly seek out a CSA sample when examining attachment states of mind. Some participants may therefore have experienced sexual abuse but not reported this. Increased identification of sexual abuse has also been evidenced when additional behaviourally phrased questions specific to sexual abuse have been added to the standard AAI format (Madigan et al., 2012). However the importance of not having too many probes and questions is a strength of the AAI as asking too many probes and questions regarding CSA could compromise the reliable detection of defences in relation to a given traumatic event (Madigan et al., 2012). Moreover self-report may be particularly unreliable within populations in which dissociation typically features, given by its very nature dissociation segregates some self relevant information from awareness (Bailey et al., 2007).

Conceptualisation

The lack of a direct association between CSA and attachment states of mind on the AAI suggests other mechanisms are implicated in the resulting developmental trajectories for individuals with a CSA history and points to a more complex etiological model. It has been suggested that it is not the trauma per se, but how the attachment system mediates these experiences which can help explain the long term sequelae of CSA. Evidence is emerging that it is the more subtle and continuing aspects of childhood care that are key as to how attachment representations develop and from this, the ways in which affect come to be regulated in order to manage painful experience.

A caregiving environment marked by security, and therefore characterised by interactions with more mature minds that are reflective and affectively attuned, gives rise to secure IWMs of self and other and fosters the optimum development of RF abilities. In such environments mentalising interactions with caregivers helps the infant begin to identify, modulate and express (internally or externally) affects thereby regulating distress when it is experienced (Winnicott, 1967, 1971; Fonagy, Gergely, Jurist & Target, 2007). Over time the infant learns how to identify how they feel and manage feelings on their own as well as with the help of others. The ability to engage in RF is therefore key to emotion regulation and helps explain behaviour in oneself and others through the capacity to conceive of mental states. RF abilities inform our IWMs, and together, help mediate and moderate the impact of traumatic experiences (Gumley, 2010).

However, experiencing CSA has been found to increase the risk of co-occurring trauma, maltreatment and loss in an individual's development and a higher proportion of individuals will have therefore lacked a secure base. As a result RF capacities tend not to flourish, in turn leaving traumatic experiences unresolved or unintegrated. The HH framework expands and elaborates on the quality of such disorganisation and operationalises the states of mind that present on the AAI secondary to chronic relational trauma, which includes not only episodic traumas of abuse but the cumulative traumas of consistently unresponsive caregiving. Since the severity of CSA is determined by HH status and not U status it appears many of the psychological correlates of abuse are likely to be effects of traumatic events occurring in the context of attachment relationships marked by serious deviance or even sustained deviance itself. This suggests that the lack of direct association between CSA and Attachment SoM can be accounted for by particular types of affect regulation strategies as defined by the HH framework, which aim to dismiss or minimise painful experiences.

In order to defend against the emotional pain of conceiving of an attachment figure's wish to bring harm, an initial coping strategy may be to inhibit mentalisation, at least in attachment contexts. However this originally defensive disruption of mentalisation can, if not rectified, potentially result in deficits in this skill, compromising the ability to make sense of and regulate pain. There could also be a compounding effect, as the exposure to abuse by an attachment figure may not only inhibit the use of mentalisation but impede its development. In the wider context such individuals are seemingly less likely to be exposed to circumstances which promote the use and further development of these skills. This, in combination with the varied dynamics arising from such a caregiving environment is thought to create certain psychological processes over time that is being captured in the HH framework. Such a developmental trajectory is believed to compromise individuals' abilities to cope with stressful life events, in addition to a compromised ability to identify and avoid future risks for further interpersonal trauma, in turn, increasing vulnerability to revictimisation in adulthood.

The analogy described above is a helpful start in beginning to better differentiate the risk and resiliency factors that contribute to coping, adaptation and recovery from CSA. It appears it is not the severity of the experience of CSA but how this comes to be made sense of through the ability to engage in mentalisation, which is hypothesised to account for subsequent Attachment SoM rather than the abuse itself. A precursor to resilience, therefore, is the capacity to situate and regulate this pain in the context of an overall narrative, with the long term impact of a caregiving environment that does not foster this appearing key in contributing to a continued vulnerability to experiencing a range of difficulties into adulthood. Engaging in mentalisation enables a balance of processing in which to integrate life events and helps foster attachment security. This helps individuals with a CSA history build resilience by developing their capacity to mentalise and think about experiences in psychotherapy which has important

implications for coping, adaptation and recovery. It is anticipated that in doing this, a greater capacity to counteract the effects of trauma will be fostered.

Recommendations

Clinical and Research Recommendations

This review found that the majority of individuals with a CSA history had an unresolved/disorganised SoM with respect to attachment. However further work is needed to generate a greater understanding of the quality of attachment disorganisation. More use of 5 Way AAI Analysis as well as the HH and RF frameworks would aid understanding as to how attachment representations mediate the experience of CSA, as well as increase understanding as to the wider states of mind that present within the context of chronic relational trauma. More exploration of individuals' ability to engage with mentalisation, how this develops and how this could be promoted in clinical practice would be interesting given its link in fostering resilience. This would also help clarify whether the main purpose of clinical work should, as hypothesised, focus on reflective function and address attachment states of mind through the therapeutic relationship. In ascertaining this, prospective studies and supplementary assessment of mentalisation abilities as coded by RF, would help make clearer the relationship between RF and the resolution of trauma. Thus a greater understanding as to the quality of attachment representations in combination with the capacity to engage in RF would lead to more nuanced ways of how these can be worked with therapeutically and also inform prevention work.

Treatment Implications for those with a CSA history

Regarding treatment implications, it is recognised that the level of functioning among help seeking individuals with a history of CSA can be variable, although many are likely to be distressed about loss and abuse experiences to such an extent that they find they are unable to speak coherently about them. Thus interventions that support cognitive and affective integration of these experiences and in so doing limit their power to disrupt reality testing and reasoning, are likely to be beneficial (Stalker & Davies, 1995, 1998). For those who are also parents, emerging evidence highlights the potential benefits of engaging them in an initial phase focused on their own trauma history with the second on improving the quality of the attachment relationship with their children. Doing this is with the view of addressing the intergenerational transmission of trauma and highlights the need for early prevention programs designed for parents and children at greatest risk (Madigan et al., 2012).

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Figure 1: Flowchart of Search Strategy and Results

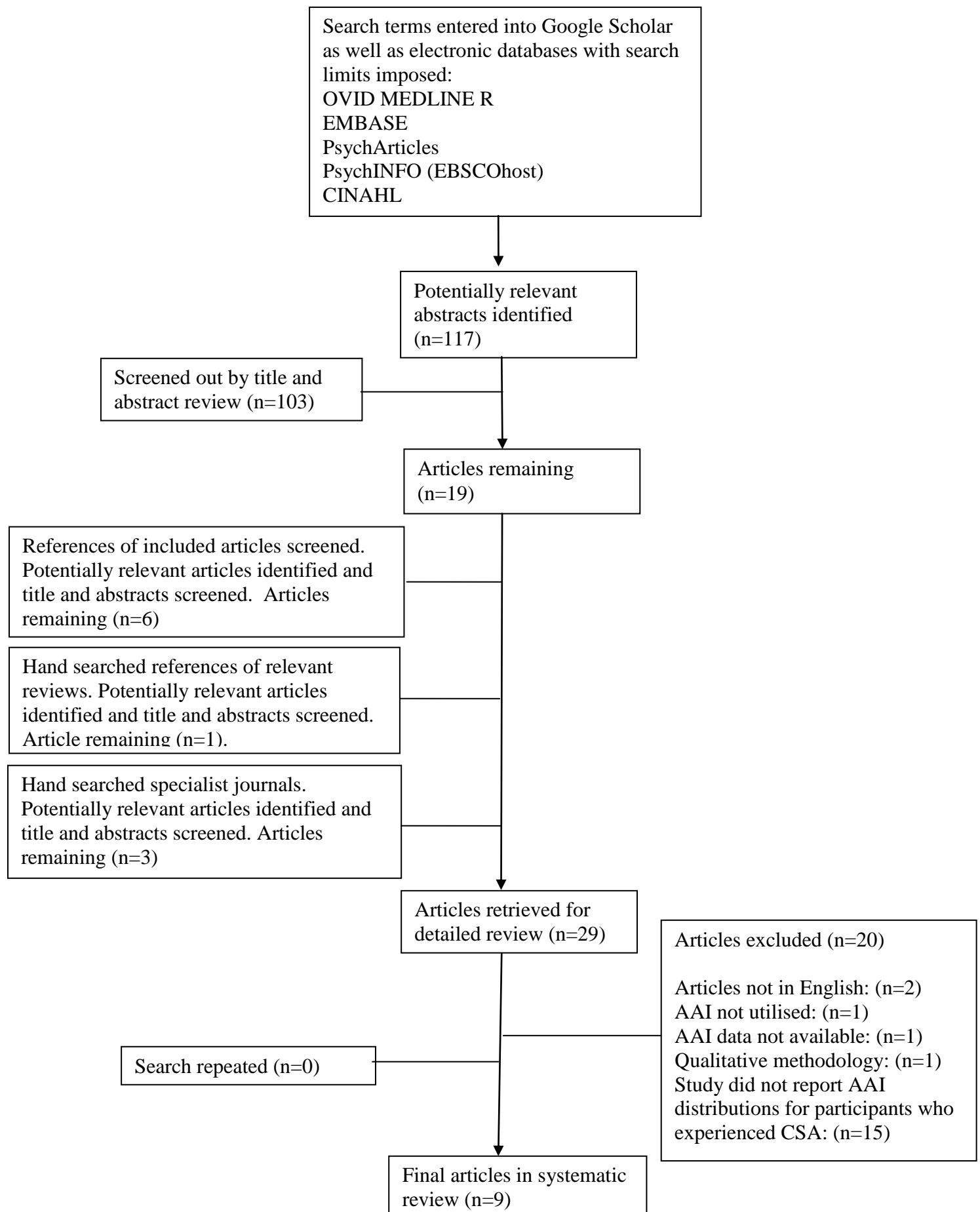


Table 1: Associations between CSA and AAI

Authors	Sample	Design & Methodology	Measurements	N & % abused	CSA and AAI Findings
Lyons-Ruth et al. (2005, 2003)	45 mothers and their 7 yr old children (17 female & 28 male) - high risk sample	Longitudinal birth cohort study Data for 7 yr, follow-up post birth	Infant Ainsworth Strange Situation (18mnts) Maternal AAI (7yrs) - attachment (F, Ds, E, U & CC) & H/H states of mind Ambiance (18mnts) (Lyons-Ruth, Bronfman & Parsons., 1999*) - measure of disrupted maternal affective communication	CSA N=9 (20%) CSA & PA N=5 (11%) (Based on AAI)	No significant difference between CSA v no trauma on AAI CSA significantly associated with H/H states of mind No direct association between abuse and AAI U status No association between AAI U or CC status and infant D Maternal H/H associated with infant D and relationship is at least partially mediated by disrupted maternal affective communication
Stalker & Davies (1998, 1995)	40 females – clinical sample	Cross-sectional study	AAI - attachment states of mind (F, Ds, E, U & CC) Global Assessment Scale (Endicott et al., 1976)	CSA N=40 (100%) (Part of inclusion criteria)	CSA N (overall) F: 5/40 Ds: 5/40 E: 6/40 U _{abuse} : 9/40 U _{loss} : 7/40 U _{abuse & loss} : 8/40 (note: CC-6/40 but put into best fitting alternative category – 4/6 E, 1/6 Ds, 1/6 F & E) Of 24/40 AAI U status best fitting alternative category: E: 14/24 Ds: 1/24 CC: 9/24 With CC collapsed: E: 21/24

					<p>Ds: 3/24</p> <p>More than half of females (23/40) had some meaningful interpersonal relationships as measured by the GAS</p>
Pierrehumbert et al. (2009)	<p>CSA Group: 27 females - clinical sample</p> <p>Control Group: 17 females - normative sample (note: 6 control participants experienced CSA and were included in this group)</p>	Cross-sectional study	<p>AAI - attachment states of mind (organised (F, Ds / E) & disorganised (U))</p> <p>Early Trauma Inventory – ETI; structured interview concerning traumatic childhood &/ adolescent experiences (Bremner et al., 2000, 2007)</p>	<p>CSA N=33 (75%)</p> <p>CSA Group: CSA N =27 (100%) (Part of inclusion criteria)</p> <p>Control Group: CSA N =6 (35%) (Based on ETI)</p>	<p>CSA Group: N (overall) F/Ds/E: 10/27 U: 17/27 (15/17- higher scores at the scale non resolution re to trauma v loss score. 1 higher loss score. 1 equivalent scores for trauma & loss)</p> <p>Control Group: N (overall) F/Ds/E: 15/17 U: 2/17 (Higher scores for U for loss)</p> <p>CSA group had significantly higher levels of AAI U classification than control group</p> <p>No significant differences between AAI organised (F, Ds & E) and AAI U status within the CSA group on characteristics of abuse</p>
Stovall-McClough & Cloitre (2006)	60 females – mixed sample	Cross-sectional study	<p>AAI - attachment states of mind (F, Ds, E & U)</p> <p>History of abuse assessed by researchers via interview</p>	<p>CSA N=55 (91%)</p> <p>CSA & PA N=37 (62%) (Based on interview with researchers)</p>	CSA severity, extent (combination of duration & frequency) and number of perpetrators did not predict AAI U _{abuse} status
Alexander (2009)	93 females – clinical sample	Cross-sectional study	<p>AAI - attachment states of mind (F, Ds, E & U)</p> <p>History of abuse in childhood and adulthood screened by researchers</p>	<p>CSA N= 33 (36%) (Based on interview with researchers)</p>	Significant association between CSA and parental role reversal on AAI
Bailey et al. (2007)	62 adolescent mothers –	Longitudinal birth cohort	Maternal AAI (prenatal)	CSA N=21 (34%)	For CSA:

	high risk sample	study Prenatal data and for 4.5 year, follow-up post birth	-attachment states of mind (F, Ds, E & U) The Borderline Features scale of the Personality Assessment Inventory (4.5yrs) (Morey, 1991) Childhood Trauma Interview (4.5yrs) (Fink, 1995)	CSA & PA N=12 (19%) (Based on AAI & CTI)	N (overall) U: 15/21 CSA significantly associated with increased likelihood of being classified as AAI U, U _{abuse} and U _{loss} AAI U _{abuse & loss} status significantly mediated the association between CSA and relationship problems
Madigan et al. (2012)	55 adolescent mothers (second trimester of pregnancy) – high risk sample	Cross-sectional study	Maternal AAI (prenatal) - attachment states of mind (F, Ds, E, U & CC) [AAI adapted - behaviourally focused questions and probes about maltreatment were added] Maltreatment Classification Scale (MCS; Barnett et al., 1993) Childhood Trauma Questionnaire (CTQ; Fink, 1995)	CSA N=26 (47%) (Based on MCS & CTQ) CSA N=30 (59%) (Based on AAI & CTQ)	For CSA: N (overall) U: 29/30 Significant association between CSA and AAI U status

CHAPTER 2

MAJOR RESEARCH PROJECT

Title: Development and Validation of an Interview Measure for the Assessment of Compassion in Complex Mental Health Difficulties.

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Lay Abstract

Background

Compassion is defined as a “*sensitivity to suffering in ourselves and others with a deep motivation and commitment to prevent and alleviate it*” (HH Dalia Lama, 2001). It involves the ability to be kind, warm, caring, understanding and empathic for ourselves and for others. It is distinguished from empathy as compassion also involves the motivation to alleviate pain, suffering and distress in ourselves and in others. Compassion can flow from oneself towards other people, from others to the self and from self to self (Gilbert, 2005). People with complex mental health difficulties can experience compassion as difficult due to painful life experiences (including trauma and abuse) or lack of supportive relationships during development. Compassion can be measured by asking people to complete questionnaires requiring them to report on their own self-compassion. However people with complex mental health difficulties may find it difficult to identify compassion in themselves (Laithwaite et al., 2009). MacBeth and Gumley (in preparation) have suggested an alternative way to measure compassion is to identify how compassion is understood and expressed during interviews designed to elicit a compassionate related discourse in conversations. They have developed the ‘Narrative Compassion Scale’ (NCS) to do this, which can be considered as a novel method of measuring compassion (Gumley & MacBeth, unpublished manuscript; see Appendix 2.10).

Research Aims and Questions

The study aimed to further develop this method of measuring compassion. The study sought to explicitly ask about individuals’ understanding of compassion and explore memories of compassion during a narrative based interview. Scores derived from this scale were then compared with self-report measures of compassion, childhood trauma and

attachment related anxiety and avoidance. It was hypothesised that participants would score significantly higher on compassion flowing from oneself towards other people compared with others to the self, and that participants would score higher on compassion flowing from other people towards oneself compared with self to self. It was also hypothesised that lower levels of narrative coded compassion would be correlated with higher self-ratings of fears of compassion, lower self-ratings of self-compassion, higher levels of childhood trauma and higher levels of attachment anxiety and avoidance.

Methods

Participants with Complex Trauma and participants diagnosed with Schizophrenia or a related disorder who were under the care of Mental Health, Trauma or Addiction services were invited to take part. The researcher approached relevant staff members to help with recruitment. Staff explained the aims and procedures of the study to potential participants who were thought to be suitable and provided information on the research project. Voluntary Informed Consent was taken by the researcher.

The researcher met with each participant to complete the Narrative Interview for Compassion. All interviews were recorded, transcribed and coded for compassionate understanding (i.e. being able to describe and understand the skills and attributes of compassion), as well as for compassion flowing from self to other, other to self, and self to self. Participants were also asked to complete self-report questionnaires to measure compassion, a self-report questionnaire to ascertain any trauma experienced in childhood as well as self-report measures looking at attachment related anxiety and avoidance. All information gathered was anonymised and securely stored. Recordings were destroyed after being transcribed.

Results

Overall participants' NCS scores demonstrated a good grounding in the understanding of compassion. Overall participants scored highest on compassion flowing from self to other and lowest on compassion flowing from self to self with compassion flowing from other to self situated in-between. There were no associations between the NCS and self-ratings of compassion, as well as between the NCS and levels of attachment anxiety and avoidance. There were also no associations between the NCS and self-ratings regarding fears of compassion, except for greater fears of compassion from others being significantly correlated with lower levels of compassionate understanding. Greater trauma was linked to higher levels of narrative coded compassion and a general trend indicated greater trauma was associated with lower self-reported compassion.

Practical Applications

Further refinement of the narrative measure of compassion was with the view of helping to develop future research and clinical interventions that use compassion focused strategies. It was also with the view of providing information as to how useful and robust this measure is.

The completed study will be made available in the form of a thesis from the library at the University of Glasgow in due course. It will also be sent to a scientific journal for publication.

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Abstract

Background - Research suggests that individuals with complex mental health problems may experience problems expressing compassion to themselves and others. Difficult life experiences can lead to fears of compassion, which block such feelings and their expression. Expression of compassion can arise from self to others, others to self and self to self. Compassion is usually measured using self-report questionnaires. It has been suggested that interview based methods may be helpful for individuals with complex mental health problems who are fearful of compassion. *Aims* - The current study aimed to further develop a narrative based measure of compassion by explicitly exploring memories of compassion. All interviews were transcribed, anonymised and coded. Scores derived from the 'Narrative Compassion Scale 'NCS' were compared with self-report measures of compassion, childhood trauma as well as attachment anxiety and avoidance. *Design* - A cross-sectional mixed methods design was used with a within subjects condition and two between subjects groups. *Methods* – A total of 27 participants gave their voluntary and informed consent to enter the study: 13 were diagnosed with Schizophrenia and 14 with Complex Trauma. All participants participated in an interview exploring their understanding of compassion as well as their memories of compassion linked to expressing compassion to others, from others to self and from self to self. Self-report measures of compassion, childhood trauma and attachment anxiety and avoidance were also completed. *Results* – Participants scored highest on compassion flowing from the self to others and lowest on compassion flowing from self to self, with compassion flowing from others to self situated in-between. There were no associations between the NCS and self-ratings of compassion, as well as between the NCS and levels of attachment anxiety and avoidance. There were also no associations between the NCS and self-ratings regarding fears of compassion, except for greater fears of compassion from others being significantly

correlated with lower levels of compassionate understanding. Greater trauma was linked to higher levels of narrative coded compassion and a general trend indicated greater trauma was associated with lower self-reported compassion. *Implications* - Findings will help provide further insights into psychological processes that can be addressed within psychotherapy and facilitate exploration of compassion in complex mental health problems.

Keywords: Compassion, trauma, psychosis.

Introduction

Traditional Cognitive Behavioural Therapies (CBT) have focused on the content of thoughts and beliefs and how these relate to emotion and behaviour. However it is now well recognised that for some people, although they can generate alternative more helpful thoughts, beliefs and behavioural responses to their emotional distress, this is not necessarily accompanied by an alleviation in distress (Stott, 2007). A person can understand the logic of alternative more helpful thoughts, but may not feel reassured by them (Rector, Bagby, Segal, Joffe & Levitt, 2000). Such individuals have been shown to relate to their cognitive experiences in a harsh and aggressive manner. They have what is termed a 'shame focused' mind (Gilbert, 1989, 1998, 2007; Gilbert & Miles, 2000). For these individuals shame and different forms of self-criticism can dominate their inner world and they find it difficult to experience feelings such as kindness, warmth and compassion for the self (Gilbert, 2009a).

The development of these individuals' difficulties can be understood in the context of early development involving attachment relationships, peer relationships and difficult life events such as trauma, separation, illness and loss (Lee, 2005). Consistent with Attachment Theory, external relationships become internalised over time and Internal Working Models (IWM's) guide how individuals' respond to stressful life experiences (Bowlby, 1969, 1973, 1980, 1988). For individuals from difficult backgrounds, it is understood that external relationships and experiences are internalised as forms of self-attacking, self-criticism and avoidance (Lee, 2005; Gilbert, 2005a; Myin-Germeys & van Os, 2007; Liotti & Gumley, 2009). Under stress they experience their internal (self-self) and external (other-self) worlds as hostile and threat-focused (Gilbert & Procter, 2006).

According to Social Mentalities Theory (Gilbert, 2005a, 2007, 2009b) humans have evolved mental mechanisms to regulate different types of interpersonal relationships. Central to this theory is the idea that our sense of self is socially rooted, and therefore

reflects internalised representations of external relationships. It recognises the fundamental importance of the inter-dependence and connectivity between beings and describes the interplay between three social mentalities focused on: 1) caring or attachment based relationships 2) social rank relationships linked with social attractiveness and competition and 3) relationships which trigger threat detection and survival responses. It is proposed each of these mentalities is linked to underpinning and evolved neurophysiological systems (Gilbert, 1989, 2000, 2005a, 2005b). The Caring Social Mentality has evolved to attune to and regulate attachment relationships, which involve feelings of closeness, intimacy, sharing and caring (e.g. parent-infant or romantic relationships). Hormones such as opiates and oxytocin have been associated with this affiliative system and are thought to enhance attunement to others' minds and mental states (Carter, 1998; Panksepp, 1998; Uv  ns-Morberg, 1998; Gilbert, 2005a, 2007, 2009b). This social mentality can be distinguished from a Socially Ranked Mentality, which has evolved to manage environmental priorities linked to resource allocation and social hierarchies (Depue & Morrone-Strupinsky, 2005). This mentality is closely linked to relationships that involve attractiveness, rank, dominance, assertiveness, competition, striving and status, and is thought to be underpinned by dopamine, which is arousing and activating (Panksepp, 1998; Gilbert, 2005a; Gilbert & Procter, 2006). Finally the Threat Based Social Mentality has evolved to manage threatening experiences and recruits mental mechanisms orientated towards the detection and response to threat (Legg & Gilbert, 2006). It has been proposed that this mentality is underpinned by neurophysiological systems involving serotonin (Perry et al., 1995; Gilbert, 2005a; Gilbert & Procter, 2006). In sum these three social mentality systems are thought to interact and form the basis of interpersonal and affect regulation.

It has been proposed that the lack of exposure to positive affiliative (attachment) relationships limits the opportunity for individuals to have experiences and develop

emotional memories of feeling content, soothed and safe (Gerhardt, 2004). This prohibits the full maturation of the Caring Social Mentality, which subsequently compromises these individuals' abilities in understanding and feeling safe in their own emotions (Schorer, 1994; Leahy, 2005). In times of stress these individuals will not have ready access to emotional memories and capacities for self-soothing to stimulate a felt sense of reassurance and safeness (Brewin, 2006). Traumatic backgrounds sensitise these individuals to threats, triggering the over stimulation/development of their threat based mentality (Perry et al., 1995; Schorer, 2001; Gerhardt, 2004). The social rank based mentality is closely implicated with the threat based mentality, given it is best suited to deal with social threats and involves attending to, for example, others power and potential harmfulness or neglect or abandonment. Individuals who have not, therefore, been able to internalise a sense of warmth and who have not felt loved by others can become excessively seeking and competitive as a way to try and earn their place, and can be sensitive to rejection. Thus these individuals have experienced events and relationships that rupture feelings of safeness and compensate for this by overly relying on threat-based strategies to regulate their feelings (e.g. avoidance, self-criticism and self-attack) (Gilbert 2005a; Lee, 2005; Myin-Germeys & van Os, 2007; Liotti & Gumley, 2009). They have learned to notice threats or potential threats quickly and respond with fight, flight, freeze and/or submission (Marks 1987; Gilbert 2001). From a diagnostic perspective, such individuals are at higher risk to go on to experience a broad range of disorders, such as personality disorders, eating disorders, post-traumatic stress disorder and psychosis (Dimaggio, Vanheule, Lysaker, Carcione, & Nicolo, 2009; Gumley, 2010), which supports the proposition of common developmental pathways being implicated in the pathogenesis across diagnostic groups (e.g. Gumley, 2010).

Compassion Focused Therapy

An appreciation of these individuals' difficulties has led to the development of Compassion-Focused Therapy (CFT) (Gilbert, 1992, 1997; Gilbert & Irons, 2005). Within CFT the idea is to help stimulate and develop the compassion/affiliation focused soothing system to help support these individuals to draw on mental mechanisms that cultivate compassionate relating with others and themselves and thereby promote effective affect regulation. Compassion is widely understood as a sensitivity to suffering and pain in oneself and in others combined with the sincere motivation and intention to alleviate pain and distress (HH Dalia Lama, 2001). Thus compassion is part of the affiliative social mentality linked to the formation and maintenance of supportive relationships (Gilbert, 1989, 1998, 2007). From this relational point of view compassion involves the co-regulation of two attachment competences: safe haven and secure base (Bowlby, 1988; Gilbert, 1992, 1997).

Safe haven refers to the competences linked to providing a safe context for the expression of distress involving the sensitivity and attention to one's own and others' needs; the expression of warmth, empathy, concern and caring; the capacity for distress tolerance, acceptance and forgiveness; and the attunement of responding in a way that is mindful, non-judgemental, kind-hearted and has the intention to alleviate distress and promote growth and wellbeing. Secure Base refers to the competences linked to the freedom and autonomy to explore the internal and external world, which involves attributes including courage, taking responsibility, wisdom, balance, reflexivity and perspective taking (Bowlby, 1988). These attachment competencies that, together, reflect secure IWMs typically develop within an early environment whereby the infant repeatedly experiences the caregiver as sensitive and responsive to their distress, which helps in the emergence of mentalisation abilities (i.e. an understanding of mental states (i.e. intentions,

feelings, thoughts and desires) in order to make sense of, or anticipate, both one's own or others actions). Moreover, the safe haven offers the infant a secure base for exploration, and sets them up to respond flexibly to later stressful events in a manner that is both compassionate towards the self and others (Bowlby, 1988; Gilbert, 1992, 1997).

Individuals, however, who have come to overly rely on threat based strategies to help guide how they respond to stressful life experiences and thus relate to their experiences in a manner which is harsh and aggressive, may experience compassion as a form of threat (e.g. "other people are compassionate for exploitative reasons") or view compassion as a sign of weakness (e.g. "being self-critical helps prevent my flaws from showing") (Gilbert et al., 2011). These individuals' early caregiving environments were not typically characterised by security and the associated attributes and skills therein (e.g. closeness, intimacy, sharing, caring, warmth, kindness and compassion). In CFT the aim is to help such individuals move from a self-attacking style to one of self-soothing and compassion. It is with the aim that this style of self-relating will promote recovery and enable individuals to be less critical about themselves and their experiences as well as to feel less shameful about them (Legg & Gilbert, 2006).

To help stimulate and develop the compassion/affiliation focused soothing system, CFT defines specific attributes and skills of compassion that can be developed within the therapeutic frame. Compassionate attributes include a concern for wellbeing, sensitivity to distress, an ability to tolerate distress, sympathy, empathy and taking a non-judgmental stance. Such attributes apply both towards others and to the self (Gilbert, 2005, 2009b, 2010). The skills of compassion include creating feelings of kindness, warmth and support in the work (Gilbert & Procter, 2006; Fehr, Sprecher & Underwood, 2009; Gilbert, 2009b).

A key aspect of the exercises within CFT is the consideration given to compassionate flow. Trower, Casey and Dryden (1988) were the first to propose the

concept of flow when assessing evaluations people endorse that can lead to distress in psychotherapy. They argued for the importance of such evaluations taking account of the direction in which they flow and the implications of this for the therapeutic process. They proposed three possible directions: other to self (the person's perception of how others evaluate them), self to other (the person's evaluation of others) and self to self (the person's evaluation of self). CFT considers this interpersonal evaluative process within the therapeutic frame to deepen understanding as to why individuals high in shame and self-criticism may find it difficult to self-soothe and be compassionate.

CFT organises exercises hierarchically, focusing on expressing compassion towards others, experiencing compassion coming from others, and experiencing self-compassion (Neff, 2003a, 2003b; Gilbert, 2009a, 2010; Braehler, Gumley, Harper, Wallace, Norrie & Gilbert, 2013). The rationale for this hierarchical organisation is that compassion can trigger the threat system. For example blocks to expressing compassion can be related to a fear of compassion. By expressing kindness to others, for example, individuals might worry that they are seen as weak and vulnerable to exploitation. When others express compassion it can create distress through fears that people are being deceitful or the experience of compassion itself can arouse negative affect which can be threatening and difficult to tolerate. Finally, self-compassion might be regarded as a form of self-indulgence or laziness, or indeed self-compassion can also arouse distressing emotions and memories that are too painful to tolerate. Gilbert, McEwan, Matos and Rivis (2011) recently developed the Fears of Compassion Scales which assess fear of compassion from others (e.g. "feelings of kindness from others are somehow frightening"); fear of expressing compassion towards others (e.g. "if I am kind to others they will take advantage of me"), and fear of expressing compassion to oneself (e.g. "being kind to oneself is a weakness"). They found that in

combination with self-criticism, fear of compassion was the most powerful predictor of depression.

In this way blocks to the expression of compassion will likely shape experiences of compassion in the current context but also be rooted in early adverse experiences including trauma, abuse, neglect, deprivation, insecure attachment, bullying, separation, loss and illness. Therefore, whilst many individuals might be able to describe what compassion means in terms of the competences and attributes outlined above, their experiences of compassion at different points in the flow may be different. The implications of this may be that individuals (consciously or unconsciously) resist engaging in compassionate behaviours or experiences thereby compromising therapeutic outcome (Rockcliff, Gilbert, McEwan, Lightman & Glover, 2008; Gilbert 2010; Rockcliff, Karl, McEwan, Gilbert, Matos & Gilbert, 2011). In CFT the therapist would, therefore, aim to address individuals' fears of compassion, to help them move towards cultivating compassion for the self and others (Gilbert et al., 2011). Studies have shown that for a range of mental health difficulties promoting compassion in this way can potentially alleviate psychological distress (e.g. Gilbert & Procter, 2006; Mayhew & Gilbert, 2008; Laithwaite et al., 2009; Braehler et al., 2013; Lucre & Corten, 2013; Gale, Goss & Gilbert, submitted; Judge, Cleghorn & Creamer, in preparation).

Measurement of Compassion

Compassion has been predominantly measured using self-report methods (Neff, 2003b). In a recent meta-analysis, MacBeth and Gumley (2012) found evidence that greater self-compassion was linked to lower levels of depression, anxiety and stress. However, ratings of self-compassion have been limited to the Neff Self Compassion Scale (Neff, 2003b). Although there was good evidence for reliability and construct validity, self-report

of compassion in clinical samples may be problematic where individuals might have little experience of compassion or have experience of problematic attachment relationships. For example, it has been shown that in studies of attachment, individuals who are insecure in their attachment self-report as being secure, indeed this is a particular feature of avoidant (insecure) attachment (Riggs et al., 2007). Arguably individuals who are fearful (and avoidant) of compassion may also report themselves as being self-compassionate. Consistent with this, Mayhew and Gilbert (2008) found some inconsistency in self-reports from voice hearers and their ability to engage in compassionate exercises. Gumley and MacBeth (unpublished manuscript; see Appendix 2.10) attempted to address this methodological issue by developing a coding system to assess the expression of compassion occurring during discourse (NCS). Preliminary evidence for the validity of the measure was shown in a pilot randomised controlled trial of CFT in psychosis (Braehler et al., 2013), which found that CFT was linked to increased compassion (when describing experiences of recovery from psychosis) and that improvements in compassion were significantly correlated with improvements in depression, shame and fear of relapse in the individuals who received CFT but not those who received treatment as usual. In a later study, Gumley and MacBeth (2014, In Press) found greater narrative compassion was linked to lower psychiatric symptoms and better mentalisation, however it was unrelated to the Neff Self-Compassion Scale.

Therefore, this study further develops and extends the assessment of compassion by interview methods and seeks to further develop the NCS. In terms of the compassion interview although Gumley and MacBeth (2014, In Press) explored social support and coping, compassion was not directly enquired about. The coding framework differentiated self and other related compassion but did not differentiate between compassion flowing from others to self and from self to others. The self and other related compassion scales

were also correlated at above $r = 0.9$ and it was not clear whether this pattern of results arose because the two scales were closely associated or whether the interview was insufficient to differentiate compassion for self and compassion for others. Moreover Gumley and MacBeth (2014, In Press) did not explore individuals' understandings and portrayal of compassion. It may be that this can provide an additional means to exploring blocks to experiencing compassion, given that individuals might be able to describe what compassion means in terms of the competencies and attributes, which contrasts to their experiences of compassion at different points in the flow.

Thus it is proposed that this study will improve on these limitations. It seeks to develop an interview measure of compassion that asks questions, which directly require compassion-related discourse. It also seeks to consider how an understanding of compassion at the semantic level is implicated at the level of experience. Primarily it seeks to develop the interview and coding frame in such a way that it differentiates compassion flowing from self to others, others to self and self to self. In addressing this, a sample consisting of participants with either complex trauma or schizophrenia or a related disorder were recruited. These populations were selected as both trauma and schizophrenia are reciprocally and causally linked. Psychologically harmful experiences such as sexual and physical abuse, loss and separation during development are common in both complex trauma and psychosis (e.g. Ross & Keys, 2004; Read, van Os, Morrison & Ross, 2005; Read & Gumley, 2008; Sar, 2011). Therefore, given both groups have common experiences during childhood it is argued there may be shared developmental pathways into psychosis and complex trauma associated with difficulties engaging in compassionate relating (e.g. Gumley, 2010). Moreover it is recognised that there is an absence of data on compassion in complex mental health difficulties (e.g. Gumley & MacBeth, 2014, In Press). Data on compassion and its correlates would therefore be highly relevant.

Aims and Hypotheses

The primary aim of this study was to further develop, refine and explore the validity of the NCS to differentiate compassion flowing from self to others (self-others), from others to self (others-self) and from self to self (self-self) in a mixed clinical sample of individuals with complex trauma and schizophrenia or a related disorder. It was hypothesised that:

- 1) Individuals participating in the study would score significantly higher on self-other compassion compared to other-self compassion.
- 2) Individuals participating in the study would score higher on other-self compassion compared to self-self compassion.

The study also aimed to explore the construct validity of the NCS by exploring the following correlations. It was expected that:

- 3) Lower levels of narrative coded compassion will be correlated with higher self-ratings of fear of compassion.
- 4) Lower levels of narrative coded compassion will be correlated with lower self-ratings of self compassion.
- 5) Lower levels of narrative coded compassion will be correlated with higher levels of childhood trauma.
- 6) Lower levels of narrative coded compassion will be correlated with higher levels of attachment related anxiety and avoidance.

Method

Design

A cross-sectional within and between subjects design was used to evaluate the aims and hypotheses. Participants with either complex trauma or schizophrenia or a related disorder were recruited.

Participants

Participants were under the care of Mental Health, Trauma or Addiction services in the NHS Greater Glasgow and Clyde (NHS GG&C) area. Participation was voluntary, on the basis of an informed consent process. It was made clear to participants that they could withdraw from the study at any point. Ethical approval was granted by the NHS West of Scotland Research Ethics Committee (see Appendix 2.2; Ref:13/WS/0014). Managerial approval was obtained from NHS GG&C Research and Development (see Appendix 2.3). Inclusion and exclusion criteria are described for the two participant groups.

Inclusion Criteria

Complex Trauma

Participants who had experienced complex trauma were recruited from Trauma and Addictions services in NHS GG&C. Their needs were complex with multiple variability including mental health difficulties, addictions and personality disorder. Complex trauma was defined as “*exposure to severe stressors that (i) are repetitive or prolonged (i) involve harm or abandonment by caregivers or other ostensibly responsible adults, and (iii) occur at developmentally vulnerable times in the victims life such as early childhood or*

adolescence” (Courtois, Ford & Herman, 2009). Individuals were required to be aged 16 and over and individuals legally bound to attend an inpatient/outpatient setting for treatment were still eligible to participate in the study.

Schizophrenia Spectrum Disorder

Individuals were eligible if they met ICD-10 criteria for schizophrenia spectrum disorders (i.e. schizophrenia, schizoaffective disorder, other nonaffective psychotic disorders, schizotypal personality disorder, paranoid personality disorder), in contact with NHS GG&C mental health services, aged 16 and over, and individuals legally bound to attend an inpatient/outpatient setting for treatment were still eligible to participate in the study.

Exclusion Criteria

Potential participants were excluded if the severity of individuals’ symptoms impaired their ability to participate in the study as judged by the clinical team, if individuals were diagnosed with a neurological condition deemed to affect cognitive functioning (e.g. dementia, head injury requiring hospital treatment) and if individuals were deemed to be intoxicated or under the influence of alcohol/illegal drugs as judged by the clinical team.

Recruitment Procedures

Recruitment of participants was conducted through liaison with NHS GG&C staff from within Community Mental Health, Trauma and Addictions services. Relevant staff members were approached and asked to facilitate recruitment by identifying suitable participants who met the inclusion criteria for the study, in addition to providing some information on the research project. Staff were asked to discuss the aims and procedures of

the study with potential participants (see Appendix 2.4 and 2.5). Participants were given at least 24 hours to read the information about the study provided to them and to ask the researcher any questions they may have had, before their informed consent to participate in the study was requested (see Appendix 2.6). Following written informed consent, relevant demographic information was gathered from participants before they engaged with the study procedures in a venue deemed appropriate by the participant, relevant staff members and research team (see Appendix 2.7). After participation the researcher informed participants' G.P.s of their involvement in the research should they have agreed to this when giving their informed consent (see Appendix 2.8).

Measures

Narrative Interview for Compassion-Revised (Gumley, Toal, Rhodes, Fraser & McLeod, unpublished manuscript; see Appendix 2.9)

A 30-minute semi-structured interview, which measures participants' experience of other-self, self-other and self-self related compassion. Interview design was guided by the research team's prior experience and knowledge in conducting narrative based interviews. Guidelines for the interview were provided to ensure consistency of administration across groups.

The initial interview phase was spent developing a shared semantic understanding of compassion with participants. Time was first spent generating compassionate words through discussion with the research team and ideas generated in the psychotherapy literature (e.g. McEwan, Gilbert & Duarte, 2012). The research team recruited a non-clinical sample to rate the compassionate words in order to ascertain face validity. This sample, recruited via social media and word of mouth, consisted of 38 females and 12 males

with a mean age of 29.4 years ($SD=7.14$). Forty six percent of this sample had experience of working within a mental health setting. Words achieving the highest consensus ratings were then used to explore with participants their understanding of compassion (see Appendix 2.10). Participants were asked to select those words they felt best described compassion for them. They were also given the opportunity to add any words they felt encapsulated compassion well but were not captured by the words that were selected at the outset of the interview.

The next phase of the interview required participants to explore their experiences of compassion and refer to the agreed definition of compassion when recalling these episodic accounts. Participants were asked to first recall a time that 1) they were compassionate to others 2) others were compassionate towards them and 3) they were compassionate towards themselves. Prompts were provided to ensure full exploration of participant's compassionate experiences. The prompts served two purposes to a) explore the memory of the experience the participant is recalling and b) tap in to the participant's state of mind with regards to the recalled memory. Participants were informed that they would not be expected to speak about a traumatic experience or one that distressed them. They were also informed that they would not be expected to reflect on their accounts if they did not wish to.

Narrative Compassion Coding System - Revised (Gumley, Macbeth & Toal, unpublished manuscript; see Appendix 2.11)

The researcher transcribed the interviews. A member of the research team, independent from the researcher, subsequently scored the interviews by applying a further revision to the NCS (see Appendix 2.10). The researcher also scored a proportion of transcripts and an inter-rater reliability analysis was subsequently performed using the Kappa statistic to determine consistency among raters (see Results Section). The coding

system enabled analysis of the interview through bottom-up analysis of features within the structure of the narrative as well as top down analysis of the emerging themes.

In coding compassion, descriptions and experiences of compassion can occur in the context of questions that directly request reflections on compassion (e.g. Can you tell me about a time that you expressed compassion towards others? Can you tell me what was compassionate about that experience?). These so called “demand” questions were given a different weighting to other types of questions that “permit” discussion of compassion (e.g. Tell me about yourself?). Where a demand question resulted in difficulties describing what compassion was, or portraying an experience of compassion, it lowered the overall score assigned. Where experiences of compassion were freely explored, without direct prompting, this increased the overall score assigned.

When coding the portrayal of compassion, looking beyond simple descriptions of attributes was required and looking for specific autobiographical memories detailing the exchange or communication of compassion. In addition, looking for in the moment portrayals of a compassionate stance in how the individual was speaking was required. For example, in remembering a painful experience, the speaker might describe a compassionate feeling that they were experiencing in the here and now. Also in coding compassion, careful consideration was given as to whether compassion was expressed in the context of suffering, which had required the interviewer had given the participant time and space to express and articulate memories.

The further revision of the NCS provides a compassionate understanding score as well as scores for self-other, other-self and self-self compassion based on an 11 point scale from -1 to +9. The -1 score allows for an “Anti-compassionate” rating. The coding framework is not available in the public domain but is available on request from Professor Andrew Gumley.

Self-compassion scale (SeCS, Neff, 2003b)

A 26-item self report instrument measuring self-compassion. Gilbert, McEwan, Matos and Ravis (2011) reported results for two subscales, each with 13 items, by summing three factors representing positive self-compassion (self-kindness, common humanity and mindfulness) and three factors representing a lack of self-compassion/self-coldness (self-judgement, isolation and over-identification). Internal consistency for the total score has been shown to be acceptable ($\alpha = .76$), and internal reliability for the self-compassion and self-coldness subscales have been shown to be excellent ($\alpha = .89$ and $\alpha = .93$) (MacBeth & Gumley, 2012).

Fears of Compassion Scales (Gilbert et al., 2011)

Three self-report measures that measure a fear of: compassion for others (10 items), compassion from others (13 items), and compassion for self (15 items). Development of this measure is in its infancy and more research on its psychometric properties is needed. In a student sample, the Cronbach's alphas were .72 for fears of expressing compassion for others, .80 for fears of receiving compassion from others, and .83 for fears in giving compassion to self (Gilbert et al., 2011).

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1997)

A 28 item self-report that measures 5 types of maltreatment - emotional, physical and sexual abuse, and emotional and physical neglect. The CTQ shows good reliability. High internal consistency scores are evident. The coefficients of the 5 types of maltreatment are as follows: sexual abuse (.93-.95), emotional neglect (.88-.92), emotional abuse (.84-.89) physical abuse (.81-.86) and physical neglect (.60-.83) (Bernstein & Fink, 1997).

Wechsler Test of Adult Reading (WTAR; Wechsler, 2001)

This is a word pronunciation test, which provides an estimate of pre-morbid intellectual functioning. It is normed with the Wechsler Adult Intelligence Scale, 3rd Edition (Wechsler, 1997) and has UK norms and good reliability and validity (WTAR; Wechsler, 2001). WAIS III fullscale IQ scores were estimated using the WTAR raw scores and demographic information.

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

This is a 14-item self-report measure of anxiety and depression. It has shown good reliability and validity in a variety of populations (e.g. Herrmann, 1997).

Psychosis Attachment Measure (Berry et al., 2006)

This 16-item measure was based on existing measures of attachment (Bartholomew & Horowitz, 1991; Brennan, Clark & Shaver, 1998) and validated with a large analogue sample. Participants are asked to rate the extent to which each item is characteristic of them using a four-point Likert scale (1 = 'not at all' to 4 = 'very much'). A revised version of the measure, based on Berry et al.'s (2006) paper (personal communication with Katherine Berry, Oct. 2009), will be used in this study. Anxiety and avoidance subscale scores were derived by averaging scores for the 8 anxiety and 8 avoidance items.

Research Procedures

After written, informed consent was obtained, as outlined above, participants chose to meet with the researcher up to three times to complete study procedures. Due to the potentially distressing nature of discussions interviews were conducted in a place where a

relevant clinical staff member could be accessed for support. The total time taken to complete study procedures was approximately 3 hours in total. The order of presentation of the study measures was counterbalanced across participants. Upon each meeting there was at least one break and participants were provided with tea/coffee and a light snack. Participants were made aware that they could take breaks as and when needed. The researcher also used their clinical judgment and suggested breaks were taken if they deemed this as necessary, such as if participants were showing signs of being distressed. An opportunity was given for participants to reflect on how they found their experience as well as being debriefed by the researcher. Time was also spent on addressing any concerns participants had about the research process or material discussed. The researcher phoned participants if possible following their engagement in study procedures. Information on accessing support was available to participants. If deemed necessary, and the participant consented to it, the researcher contacted staff involved in the participant's care to ensure provision of the necessary support. However participants were informed, from the outset of the study, occasions whereby the researcher might have to break confidentiality due to the duty of care they have to the participant.

Justification of Sample Size

It was not possible to perform a power calculation based on similar research, given the limited research that has been conducted in relation to the aims of this research study. Based on a sample size of 45 and an alpha of 0.05 the power of the study for a small effect size ($r=0.1$) was 0.16; for a medium effect size ($r=0.3$) was 0.67; for a medium to large effect ($r=0.35-0.4$) was 0.79 to 0.89 and for a large effect size ($r=0.5$) was 0.98. Given that a medium to large effect provided clinically important implications a sample size of 45 appeared adequate to detect correlations of a moderate to large magnitude. Appendix 2.12

presents a graph that plots this data and also plots the estimated power of the study based on a sample size of 30 and an alpha of 0.05, in order to provide a range of estimated powers for this study given the lack of research in this area (Faul, Erdfelder, Buchner & Lang, 2009). With a smaller sample size the power to detect medium effect sizes was compromised ($r=0.5$). However the power for a larger effect size was $r=0.75$. Given the pilot nature of the study lower levels of power was acceptable, given a key aim of the study was to gain estimations of effect size and sample size for future fully powered studies.

Statistical Analysis

Data were analysed using SPSS version 19. The clinical and demographic characteristics of participants were described as a whole and by diagnostic groups. Shapiro-Wilk tests were conducted on appropriate variables to test for normality for each diagnostic group. Where one of the groups displayed a non-normal distribution, non-parametric tests were used to determine if there were any significant differences between groups. Levine's tests investigating homogeneity of variance of the data were also considered where appropriate. Parametric/non-parametric analyses of between subject characteristics (i.e. gender, age, education, occupation) were conducted. Differences between groups were tested using Independent Groups or Mann-Whitney U tests. Associations between categorical variables were investigated using Chi-Square or Fisher's Exact tests. Relationships between variables were examined using Pearson or Spearman correlations; and Kruskal-Wallis tests. With respect to the primary hypotheses, given these were clearly specified and multiple, Bonferroni Corrections were applied to control for the number of comparisons made. Multiple comparisons were not corrected for with respect to the secondary hypotheses due to the exploratory nature of this study. Given this study was

akin to a pilot, it was important potentially significant findings were not missed as a result of a lack of sufficient power.

Results

Demographics

Based on recruitment, participants were divided into two clinical groups – 14 individuals comprised the complex trauma group and 13 individuals comprised the schizophrenia spectrum disorder group. Descriptive data of sample clinical and demographic information are given in Table 1. There was a significant difference between the two groups based on age ($U=41$, $z=-2.430$, $p<0.05$, $r=-0.47$). Participants in the schizophrenia spectrum disorder group were significantly older ($Mdn=55$, $IQR=19$) than participants in the complex trauma group ($Mdn=46.5$, $IQR=18$). There was an apparent difference between the two groups on the basis of gender however this was not statistically significant ($p=0.054$). There were no other statistically significant between group differences on demographic variables.

Insert Table 1 Here

Insert Table 2 Here

There were multiple differences between the groups on psychological self-report variables. These are displayed in Table 2. Where one of the groups displayed a non normal distribution non parametric tests were used to determine the difference between groups. All variables were normally distributed (W ; $p>0.05$), with the exception of the

SeCS self-kindness subscale, the SeCS isolation subscale and the CTQ sexual abuse subscale.

As can be seen from Table 2, there were significant group differences on psychological variables. With regards to the SeCS, the complex trauma group had significantly lower total compassion than the schizophrenia spectrum disorder group ($t(25)=2.16$, $p<0.05$). The complex trauma group also had significantly lower levels of self-kindness compared with the schizophrenia spectrum disorder group ($U=44.5$, $z=-2.272$, $p<0.05$, $r=-0.44$). With regards to the CTQ, the complex trauma group scored significantly higher for emotional abuse ($t(25)=-2.42$, $p<0.05$), sexual abuse ($U=48.5$, $z=-2.139$, $p<0.05$), emotional neglect ($t(25)=-2.28$, $p<0.05$) and physical neglect ($t(25)=-2.26$, $p<0.05$) subscales. Finally the complex trauma group also had significantly higher self-ratings of attachment avoidance ($t(25)=-2.42$, $p<0.05$).

Properties of the NCS

Descriptive scores for the NCS for the overall sample and the two groups are presented in Table 3 and in Figure 1. Narrative Compassion data was not available for one participant with complex trauma and this participant was therefore omitted from subsequent analyses. The compassionate understanding scale was normally distributed (W ; $p>0.05$). The compassionate flow scales (from self-others, others-self and self-self) were non-normally distributed (W ; $p<0.05$). The inter-rater reliability for the compassionate understanding scale was excellent ($Kappa=1.00$, $p<0.001$). There was substantial agreement for the other-self ($Kappa=0.600$, $p<0.001$) and self-self ($Kappa=0.786$, $p<0.001$) compassionate flow scales, whilst there was moderate agreement for the self-other compassionate flow scale ($Kappa=0.538$, $p<0.05$). With regards to demographics, age,

gender, levels of anxiety and depression experienced and WTAR-predicted full-scale IQ scores, none were associated with any of the scales.

There were no significant differences between groups on each of the scales. The mean score for the compassionate understanding scale was 4.27 (s.d.=1.73) suggesting emergent understanding of compassion at the semantic level, although there may be an absence of an appreciation of all dimensions of compassion. The median scores for the scales measuring compassionate flow ranged from 2.00 (IQR=2.25) to 3.50 (IQR=3.00) suggesting minimal but present levels of compassionate responding. In terms of the pattern of NCS scores measuring compassionate flow, participants scored highest on self-other compassion (Mdn=3.50, IQR=3.00) and lowest on self-self compassion (Mdn=2.00, IQR=2.25) with other-self compassion situated in-between (Mdn=2.50, IQR=4.25).

Comparison of the NCS scale scores using the Kruskal-Wallis test indicated that they were significantly different ($H(3)=13.419$, $p<0.01$). Mann-Whitney tests were used to follow-up this finding. A Bonferroni correction was applied and the significance level adjusted to $p<0.0083$. Post hoc Mann Whitney tests indicated a significant difference between NCS scores measuring compassionate understanding and self-self compassion ($U=146$, $z=-3.557$, $p=0.000$, $r=-0.70$). Compassionate understanding was significantly higher (Mdn=4.00, IQR=3.00) than self-self compassion (Mdn=2.00, IQR=2.25). Table 4 lists the scale inter-correlations for the compassion scales. All scales were found to be significantly inter-correlated ($r_{\text{range}} = 0.498$ to 0.861).

Insert Table 3 Here

Insert Figure 1 Here

Correlations between the NCS and Psychological Self-Report Measures

Table 5 lists correlations between the NCS and psychological self-report measures. In contrast to what was predicted by the hypotheses, there were no significant associations between the NCS and self-ratings of compassion. The pattern of correlations between the NCS and SeCS suggested small, largely negative non-significant correlations between the scales. The mean correlation between the NCS Understanding Subscale and SeCS was $r=-0.107$ ($r_{\text{range}}=-0.266$ to 0.099), between the NCS Self-Other Compassion Subscale and SeCS was $r=-0.068$ ($r_{\text{range}}=-0.310$ to 0.166), between the NCS Other-Self Compassion Subscale and SeCS was $r=-0.089$ ($r_{\text{range}}=-0.235$ to 0.065), and between the NCS Self-Self Compassion Subscale and SeCS was $r=-0.069$ ($r_{\text{range}}=-0.323$ to 0.113). There were also no significant associations between the NCS and self-ratings regarding fears of compassion. The pattern of correlations between the NCS and Fears of Compassion Scales suggested small to moderate, negative non-significant correlations between the scales. The mean correlation between the NCS Understanding Subscale and the Fear of Compassion Scales was $r=-0.285$ ($r_{\text{range}}=-0.398$ to -0.277) (note Fear of Compassion from others $r=-0.398$, $p<0.05$), between the NCS Self-Other Compassion Subscale and the Fear of Compassion Scales was $r=-0.257$ ($r_{\text{range}}=-0.341$ to -0.179), between the NCS Other-Self Compassion Subscale and the Fear of Compassion Scales was $r=-0.172$ ($r_{\text{range}}=-0.143$ to -0.208), and between the NCS Self-Self Compassion Subscale and the Fear of Compassion Scales was $r=-0.001$ ($r_{\text{range}}=-0.076$ to -0.40).

Regarding the last study hypothesis, childhood trauma tended to be associated with the NCS, however in the opposite direction that was predicted. The pattern of correlations

found between the CTQ subscales and the NCS suggested that greater trauma was linked to higher levels of narrative coded compassion. Specifically, significant positive correlations were noted between: physical abuse and compassionate understanding ($r=0.441$, $p<0.05$); physical abuse and self-other compassion ($r_s=0.504$, $p<0.01$); physical abuse and other-self compassion ($r_s=0.522$, $p<0.01$); sexual abuse and self-self compassion ($r_s=0.462$, $p<0.05$) as well as emotional neglect and self-other compassion ($r_s=0.409$, $p<0.05$).

Given the unexpected nature of this finding, and given the lack of association between the NCS and the SeCS, a further unplanned analysis was carried out. It was hypothesised that greater childhood trauma would be associated with lower ratings of self compassion on the SeCS. Table 6 illustrates these findings. Although the number of significant tests was small the general trend indicates either a level of or a negative correlation between childhood trauma and the SeCS. The mean correlation between the SeCS and the CTQ Emotional Abuse Subscale was $r=-0.094$ ($r_{\text{range}}=-0.392$ to 0.249), between the SeCS and the CTQ Physical Abuse Subscale was $r=-0.103$ ($r_{\text{range}}=-0.276$ to -0.018), between the SeCS and the CTQ Sexual Abuse Subscale was $r=-0.105$ ($r_{\text{range}}=-0.380$ to 0.148), between the SeCS and the CTQ Emotional Neglect Subscale was $r=-0.130$ ($r_{\text{range}}=-0.433$ to 0.004), and between the SeCS and CTQ Physical Neglect Subscale was $r=-0.103$ ($r_{\text{range}}=-0.232$ to 0.072).

Finally there were no significant associations between the NCS and levels of attachment anxiety and avoidance.

Insert Table 5 Here

Insert Table 6 Here

Discussion

The principal aim of the study was to further develop, refine and explore the validity of the Narrative Compassion Scale (NCS). Specifically the study sought to differentiate compassion flowing from self-to-others, others-to-self and self-to-self. It was hypothesised that participants would score significantly higher on self-other compassion compared to other-self compassion; and also that participants would score significantly higher on other-self compassion compared to self-self compassion. This main hypothesis was not supported. However, the pattern of results was consistent with the predicted direction of hypotheses overall and in both clinical groups. The effect size of the apparent difference between self-other compassion and other-self compassion was $d=0.2$ and for other-self compassion and self-self compassion was $d=0.4$. These are small to medium effect sizes. As stated above we anticipated that a sample size of 45 would have 16% power to detect a small effect size and 67% to detect a medium effect size. Therefore our sample of $n=27$ was not adequate to detect these apparent differences. Therefore lack of apparent support for this main hypothesis may be attributable to lack of statistical power to detect the observed apparent differences.

The study did find that participants scored significantly higher on the compassionate understanding scale compared to the self-self compassion scale. This finding is of interest in light of our proposal that there may be a difference between individuals' semantic portrayal of compassion on the one hand, and their episodic portrayal of compassion on the other hand. Whilst many individuals might be able to describe what compassion means in terms of competences and attributes, their experiences of compassion may or may not reflect this understanding. However this was apparent in relation to self-self compassion. MacBeth and Gumley (2012) did not explore individuals' understandings and portrayal of compassion and this study's findings demonstrate that this can provide an additional means to exploring

blocks to experiencing compassion. The reasons for this difference are potentially numerous and could include the need for approval and social desirability (e.g. Hogg & Graham, 2011), having fears around engaging in compassionate relating (e.g. Gilbert et al., 2011) and having difficulty in conceiving of one's own and other's mental states (intentions, feelings, thoughts and desires) as explanations for behaviour (i.e. deficits in one's ability to mentalise) (e.g. Fonagy, Gergely, Jurist & Target, 2007). In this way the compassion interview works on the same principle as the AAI – the gold standard interview based measure of attachment. This measure explores individuals' understanding and portrayal of early attachment relationships and their influence into adulthood in order to assess individuals' current state of mind with respect to attachment. Here blocks to providing a secure discourse characterised by openness, coherence, consistency and reasonably fluency about childhood experiences (whether positive or negative) indicates the insecurity of attachment, and represents strategies individuals have adopted to ward off the emotional pain linked to these childhood experiences (Main, 1995). Further, research shows developing compassion in relation to lived experiences can address attachment insecurity in such a way that individuals' move towards 'earned security' (e.g. Roisman, Padron, Scroufe & Egeland, 2002).

The study explored a series of secondary hypotheses that were important to developing an understanding of the construct validity of the NCS. It was expected that lower levels of narrative coded compassion would be correlated with lower self-ratings of self-compassion, higher self-ratings of fear of compassion and childhood trauma, and higher levels of attachment related anxiety and avoidance. These hypotheses were not supported, except for greater fears of compassion from others being significantly correlated with lower levels of compassionate understanding. Moreover, although lower levels of narrative coded compassion was not correlated with higher self-ratings of childhood trauma, a pattern of

correlations showed greater childhood trauma was associated with greater narrative compassion scores which was unexpected. When this unexpected finding was followed up, post hoc analyses revealed a general trend whereby childhood trauma was associated with lower self-ratings of self-compassion.

Notwithstanding these findings, the lack of associations found between self-reports and the interview measure is not unusual when considered within the context of the attachment literature. Here a lack of association has been demonstrated regarding self-other psychological processes (e.g. Riggs et al., 2007). The lack of correspondence between self-report and interview based assessments of attachment has long been recognised (despite both measures having similar correlates). In a recent meta-analysis of 961 individuals, for example, the correlation between self-reported attachment and the AAI was equivalent to an $r = .09$ (range = .02–.17), suggesting trivial to small empirical overlap between these measures by Cohen's (1992) criteria (Roisman et al., 2007).

The unexpected finding of this study outlined above was that greater narrative compassion was associated with greater childhood trauma. Our definition of compassion was embedded in the development of a coding system, which was derived from the Dalai Lama (2001) who defined compassion as: *"Sensitivity to suffering in ourselves and others with a deep motivation and commitment to prevent and alleviate it."* On reflection, those who during the interview were coded as having greater compassion also reported more childhood trauma. This association, however, was not observed between the Neff Self-Compassion Scale and childhood trauma. How do we account for such a pattern of findings? Gumley and MacBeth (2014) have proposed that compassion can be conceptualised as having two core components. The first component of compassion is the sensitive, caring and warm attunement to the experience of pain and suffering experienced by oneself and others. It is not enough to be aware of suffering. Second, and hand in hand with this attunement is

the courage and motivation to explore, understand and alleviate suffering. Underpinning this understanding of compassion therefore is a series of competences that are arguably rooted in attachment and particularly in security of attachment. Our findings in relation to the positive association between childhood trauma and narrative compassion may therefore reflect this compassionate “state of mind” involving both openness to difficult experiences and the courage to explore these experiences and represent the unfolding of mentalisation within the context of suffering. In doing this there is an opportunity for post traumatic growth, where individuals not only recover from trauma but experience positive change (e.g. changes in self-perception, interpersonal relationships and life philosophy) arising from their struggle with highly challenging life circumstances (Zoellner & Maercker, 2006; Sawyer, Ayers & Field, 2010). Importantly, this does not mean that trauma is not also destructive and distressing. No one welcomes adversity. However research shows over time individuals can find benefits with their struggle. Estimates are that between 30 and 70% of individuals who have experienced a wide range of traumatic events (e.g. being the victim of rape, surviving physical illness and being witness to a terrorist attack) typically report some form of positive change (Joseph, 2011).

Limitations

This study has a number of methodological limitations. First, the study’s small sample size is a limitation and with a larger sample the hierarchical organisation of compassionate flow found across diagnostic groups may well have reached statistical significance. It may also be, however, that the significant inter-correlations of the narrative compassion scales contributed to this trend. It would be interesting to investigate this further using a larger sample with increased power. There are also limitations when interpreting the correlational findings, given this type of analysis cannot determine cause.

Indeed, there are complex associations between compassion and the experience of trauma that this small exploratory study is not able to fully capture. However it should be borne in mind that this study was undertaken with the intention of being exploratory in nature and sets the foundations for investigation with larger samples. Further experimental studies could explore in more detail correlations found to be of potentially important clinical significance.

Second, this study recruited a sample of convenience and this may limit interpretation of findings. Regarding demographics, the schizophrenia spectrum disorder group were found to be significantly older compared to the complex trauma group. There was also an apparent difference between the two groups on the basis of gender with a higher proportion of males recruited to the schizophrenia spectrum disorder group. Further, the largely unemployed status of the sample may represent a selection bias during recruitment. These observations highlight the need to engage more representative samples in any future research. The study was also not able to control for the psychotherapy participants may have received. Participants in both groups had varied experience of type and length of psychotherapeutic intervention. In gaining further insights into compassion as a transdiagnostic construct, it would be interesting for future studies to explore further, the potential impact of psychotherapeutic intervention, particularly CFT, on recovery.

Third, the author was also the interviewer for the complex trauma group. This may have introduced a bias into the coding of these transcripts. Although a member of the research team (AG), independent of the author, coded the transcripts, the author coded a portion of the complex trauma transcripts when ascertaining inter-rater reliability of coding.

Fourth, this study did not recruit a non-clinical comparison group and this meant normative data on the properties of the narrative coding scale was not available. This

limits interpretation of the study sample's performance, given there was no baseline from which to define impairments in the understanding of compassion and how this can unfold (or not) at the level of experience. It is unclear whether the study sample demonstrated more difficulty in engaging in compassionate relating compared to healthy populations. Indeed it may be that the inverse is true given greater experience of childhood trauma was found to be associated with higher levels of narrative coded compassion. Related to this, it is also unclear whether similar findings regarding the study sample's performance would be found with different clinical groups. However it should be highlighted that the narrative compassion scale was designed with the view of capturing compassion related discourse in clinical samples and in this way is similar to measures such as the Metacognitive Assessment Scale (Semerari et al., 2003).

Fifth, there was a level of diagnostic heterogeneity by recruiting two different clinical groups. However, in line with the literature on metacognition and mentalisation it would be appropriate to view compassion narratives as constructs with transdiagnostic applicability and in this way removes the need to differentiate according to diagnostic categories or a lack thereof. There is also emerging evidence that recognises the limitations of using a diagnostic framework to group participants with complex mental health difficulties. The complexity of these presentations is such that there is often some conceptual overlap. Individuals with complex trauma for example can have dissociative experiences that are qualitatively similar to psychotic phenomena (e.g. Sar, 2011). In support of this, a number of complex trauma participants were prescribed anti-psychotic medication in this study. Similarly individuals with schizophrenia spectrum disorder can be found to have experienced cumulative traumas that would meet the inclusion criteria for complex trauma used in this study (e.g. Ross & Keyes, 2004). Indeed such an overlap was found in this study. This raises a related issue of a diagnostic system that does not seem to

best capture and explain clinically complex difficulties. At the same time differentiation according to diagnostic categories was shown to be reliable in this study given the significantly higher levels of trauma found within the complex trauma group.

Sixth, although both complex trauma and psychosis are reciprocally and causally linked and therefore have a commonality of deficits, there is also evidence to suggest such deficits can manifest in different ways. For example, features common in people with a diagnosis of schizophrenia, such as specific aspects of neurocognition, negative symptoms, and having a history of childhood sexual abuse have been shown to be independently linked to different patterns of deficits in mentalisation (Lysaker et al., 2012). Further, mood (e.g., depression), insight and quality of life have also been shown to be associated with impairments in the ability to mentalise (Lysaker et al., 2005). A formal measure of mentalisation, such as the RF Coding Frame (Fonagy et al., 1998) would therefore capture, at least some of, these differential patterns, in a way that the narrative measure of compassion has not been designed to do. This is important given mentalisation and the activation of a compassionate state of mind are key to the successful application of the narrative compassion interview. However given the small scale nature of this current study it was not possible to administer the narrative compassion interview along with a more formal measure of mentalisation and it would be important for future research to address this gap in the literature.

Clinical and Research Implications

To date most knowledge about individuals' difficulties with compassion has come from the attachment literature and clinical observations. To advance research and understanding into the nature of compassion has required the processes to be measured. The further revision of the narrative compassion scale and the interview exploring participants'

understanding and experiences of compassion represents a further step towards this and adds to the literature in several ways.

By further developing this measurement model, it has permitted development of a more detailed understanding of individuals' capacities to relate and reflect on their experiences of compassion and how this can impact on their recovery. It has helped to delineate other oriented compassion. It has also deepened knowledge of psychodevelopmental factors that can contribute to difficulties and facilitated greater sensitivity to safe haven and secure base needs within psychotherapy, as well as helped to identify blocks to compassion within therapy. Further, it provides a means for exploring compassion unfolding in discourse as a focus for clinical supervision and in this way can form an important part of therapist self-care.

The measurement model also affords important opportunities in providing a detailed and fine-grained approach to capturing therapeutic processes and mapping mechanisms of change to outcomes within CFT. This is of important clinical value given the relevance of CFT in promoting psychological wellbeing in those with complex mental health difficulties (e.g. Braehler et al., 2013). Moreover, the model enables detailed investigation of the construct of compassion and in this way is analogous to the Metacognitive Assessment Scale (Semerari et al., 2003) and Reflective Function Scale (Fonagy et al., 1996) when considering metacognitive processes, and the Adult Attachment Interview (Main, Goldwyn & Hesse, unpublished manuscript) for the measurement of compassion.

Further, the approach to measuring compassion as reflected in narrative promotes engagement in suffering, which involves a level of complexity that self-report compassion measures may not be able to tap in to. This is not to dismiss the use of self-report compassion measures and there is support in the literature for the use of such measures (e.g. Neff, 2003b; Gilbert et al., 2011). However when the measurement of compassion is used

to inform how best to assess, engage and/or work with individuals during their recovery, it is argued that a more detailed and fine-grained approach is needed. At the same time the level of complexity involved in implementing and engaging with the narrative measure of compassion may mean the scores from this measure are unstable across time. It would be of value therefore for any future research to ascertain test-retest reliability of this measurement model.

In sum, refinement of the NCS scale has aimed to: deliver a more detailed understanding of individuals' views of recovery; deepen knowledge of psychodevelopmental factors that can contribute to difficulties and further improve on the delineation of self and other related compassion. Evidence from this study builds on existing literature supporting the relevance of compassion as a construct in complex mental health difficulties that would be of value to target clinically. In this way compassion is positioned within the emergent transdiagnostic literature on metacognition, attachment and affect regulation in complex mental health difficulties (e.g. Fonagy & Luyten, 2009; Gumley et al., 2010; Lysaker et al., 2011). Thus the NCS facilitates understanding and engagement with transdiagnostic processes in complex mental health problems and represents a useful and robust tool for researchers and clinicians to apply when working within the field.

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Table 1: Descriptive Data of Sample Clinical and Demographic Information

	Overall sample (n=27)	Schizophrenia Spectrum Disorder group (n=13)	Complex Trauma group (n=14)	Significance
<u>Age</u> (mdn, IQR) (range)	47(17) 18-69yrs	55(19) 37-69yrs	46.5(18) 18-65yrs	U=41*, z=-2.430, r=-0.47
<u>Gender</u> Male Female	15(56%) 12(44%)	10(77%) 3(23%)	5(36%) 9(64%)	$\chi^2=4.636$
<u>Education</u> Completed primary school Completed secondary school Completed college Completed university No information	8(30%) 4(15%) 9(33%) 3(11%) 3(11%)	5(38%) 2(15%) 4(31%) 1(8%) 1(8%)	3(22%) 2(14%) 5(36%) 2(14%) 2(14%)	p = 0.929, Fisher's Exact Test.
<u>Occupational status</u> Employed Unemployed Student	1(4%) 24(89%) 2(7%)	0(0%) 13(100%) 0(0%)	1(7%) 11(79%) 2(14%)	p = 1.000, Fisher's Exact Test.
<u>Affective State</u> HADs Anxiety: Normal Mild Moderate Severe HADs Depression: Normal Mild Moderate Severe HADs Anxiety m (s.d) mdn (IQR) HADs Depression m (s.d) mdn (IQR)	2(7%) 4(15%) 9(33%) 12(45%) 13(48%) 4(15%) 6(22%) 4(15%) 13.22(4.03) 13.00(5.00) 8.59(4.39) 8.00(7.00)	1(8%) 3(23%) 5(38%) 4(31%) 6(47%) 3(23%) 2(15%) 2(15%) 12.46(3.62) 12.00(6.00) 8.38(4.41) 8.00(5.00)	1(7%) 1(7%) 4(29%) 8(57%) 7(50%) 1(7%) 4(29%) 2(14%) 13.93(4.39) 14.25(7.00) 8.79(4.53) 7.50(7.00)	t=-.233 t=-.943
WTAR Predicted Full Scale IQ m (s.d) mdn (IQR)	94.15(9.69) 93.00(15.00)	95.31(7.80) 93.00(15.00)	93.07(11.36) 92.00(22.00)	t=-.592

* = p < 0.05, ** = p < 0.01, *** = p < 0.001

Table 2: Descriptive Data for Psychological Self-Report Measures

For t – m (s.d) mdn (IQR) For U – mdn (IQR)	Overall sample (n=27)	Schizophrenia Spectrum Disorder group (n=13)	Complex Trauma group (n=14)	Significance Test
SeCS Overall Score	2.62(0.55) 2.57(1.03)	2.84(0.58) 2.99(0.88)	2.41(0.45) 2.23(0.64)	t=2.16*
SeCS Self-Compassion Score	8.71(2.88) 8.45(4.30)	9.64(3.09) 10.20(6.08)	7.85(2.47) 7.25(2.79)	t=1.66
SeCS Self-Coldness Score	6.99(1.64) 7.00(2.10)	7.41(1.61) 7.00(2.58)	6.60(1.63) 6.73(2.74)	t=1.29
SeCS Self-Kindness	2.40(2.00)	3.20(2.00)	2.00(1.25)	U=44.5*, z=-2.272, r=-0.44
SeCS Common Humanity	3.07(1.07) 3.00(1.50)	3.35(1.08) 3.25(1.50)	2.82(1.04) 2.75(1.63)	t=1.29
SeCS Mindfulness	2.94(1.01) 3.00(1.75)	3.08(1.16) 3.50(2.00)	2.80(0.88) 3.00(1.75)	t=0.70
SeCS Self-Judgment	2.15(0.74) 2.00(1.00)	2.37(0.82) 2.00(1.60)	1.94(0.62) 2.00(0.90)	t=1.53
SeCS Isolation	2.00(1.50)	2.25(1.00)	1.50(1.44)	U=61
SeCS Over Identified	2.62(0.66) 2.75(1.00)	2.63(0.60) 2.75(0.63)	2.61(0.74) 2.63(1.56)	t=0.11
Fear of Compassion from Others	22.30(10.66) 24.00(12.00)	22.00(11.16) 24.00(10.50)	22.57(10.59) 25.00(19.25)	t=-0.14
Fear of Compassion for Others	29.33(11.05) 28.00(16.00)	28.08(9.77) 28.00(12.50)	30.50(12.36) 29.50(22.25)	t=-0.56
Fear of Compassion for Self	30.85(14.87) 30.00(25.00)	30.69(13.27) 30.00(16.00)	31.00(16.72) 31.00(29.50)	t=-0.96
CTQ Emotional Abuse	16.96(5.48) 18.00(9.00)	14.54(6.00) 15.00(9.00)	19.21(3.95) 20.00(7.00)	t=-2.42*
CTQ Physical Abuse	13.15 (5.93) 15.00(11.00)	11.54 (5.49) 12.00(9.00)	14.64 (6.13) 17.00(12.00)	t=-1.38
CTQ Sexual Abuse	9.00(16.00)	5.00(9.00)	18.00(19.00)	U=48.5*, z=-2.139, r=-0.41
CTQ Emotional Neglect	14.00(5.09) 15.00(8.00)	11.85(4.14) 12.00(7.00)	16.00(5.20) 16.00(7.00)	t=-2.28*
CTQ Physical Neglect	12.37(4.60) 12.00(9.00)	10.46(4.10) 9.00(5.00)	14.14(4.44) 14.50(6.00)	t=-2.26*
<u>CTQ Minimisation/Denial</u> Evidence of possible underreporting of maltreatment No Evidence of underreporting of maltreatment	6(22%) 21(78%)	4(31%) 9(69%)	2(14%) 12(86%)	p = 0.385, Fisher's Exact Test.
Attachment Anxiety	11.30(5.51) 10.00(9.00)	11.62(4.56) 11.00(6.50)	10.93(6.43) 10.00(10.75)	t=0.32
Attachment Avoidance	14.89(3.92) 15.00(6.00)	13.15(3.08) 13.00(5.50)	16.50(4.01) 17.00(5.25)	t=-2.42*

* = p < 0.05, ** = p < 0.01, *** = p < 0.001

Table 3: Narrative Compassion Interview: Properties of the NCS Descriptive scores

For $t - m$ (s.d) mdn (IQR) For $U - m$ (IQR)	Overall sample (n=26)	Schizophrenia Spectrum Disorder group (n=13)	Complex Trauma group (n=13)	Statistical Test; Significance
Compassionate Understanding Scale	4.27(1.73) 4.00(3.00)	4.00(1.47) 4.00(2.00)	4.54(1.98) 5.00(3.00)	$t=-7.86$
Self-Other Compassion Scale	3.50(3.00)	3.00(3.00)	5.00(3.50)	$U=52, z=-1.686, r=-0.33$
Other-Self Compassion Scale	2.50(4.25)	2.00(3.00)	3.00(4.00)	$U=56, z=-1.48, r=-0.29$
Self-Self Compassion Scale	2.00(2.25)	1.00(1.50)	2.00(3.50)	$U=68.50, z=-.851, r=-0.17$

* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

Figure 1: NCS Descriptive Scores

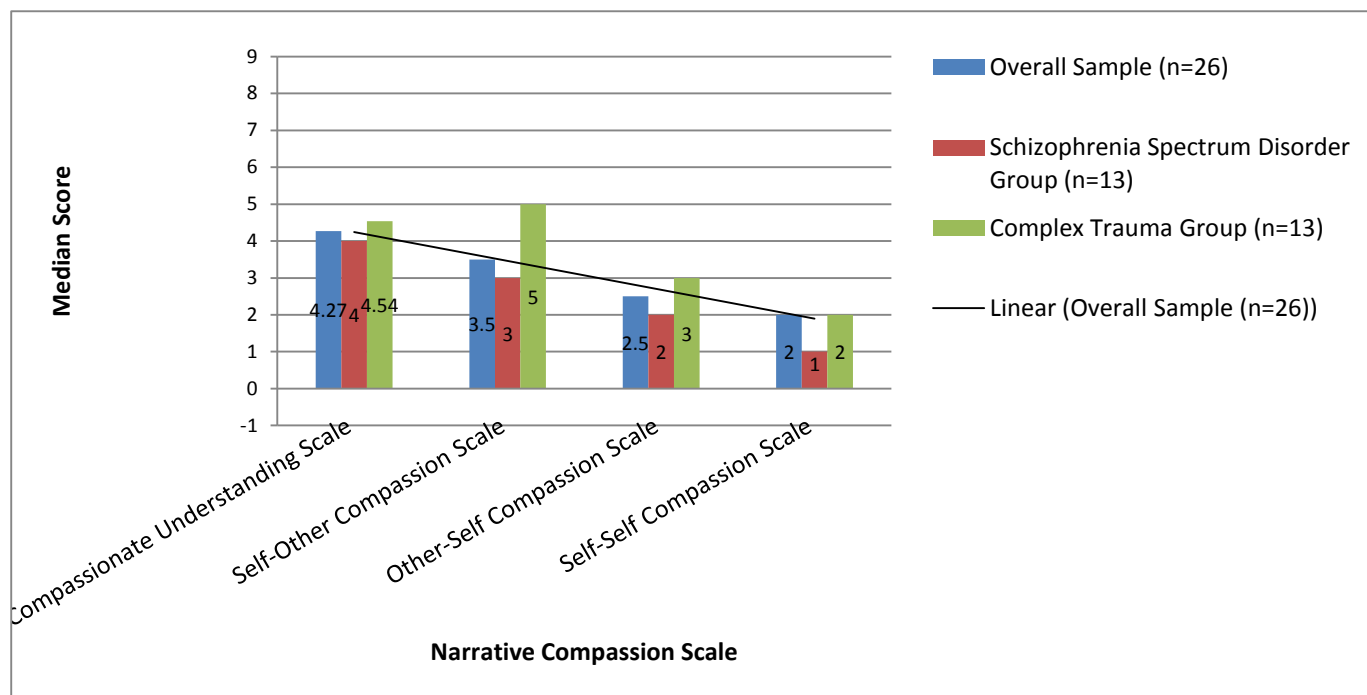


Table 4: Narrative Compassion Interview: Inter-Correlations of Subscales

	Compassionate Understanding Scale	Self-Other Compassion Scale	Other-Self Compassion Scale	Self-Self Compassion Scale
Compassionate Understanding Scale	$r=1$	$r_s=.812^{***}$	$r_s=.673^{***}$	$r_s=.498^*$
Self-Other Compassion Scale	$r_s=.812^{***}$	$r_s=1$	$r_s=.861^{***}$	$r_s=.616^{**}$
Other-Self Compassion Scale	$r_s=.673^{***}$	$r_s=.861^{***}$	$r_s=1$	$r_s=.752^{***}$
Self-Self Compassion Scale	$r_s=.498^*$	$r_s=.616^{**}$	$r_s=.752^{***}$	$r_s=1$

* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

Table 5: Correlations between the NCS and Psychological Self-Report Measures

(n=26)	Compassionate Understanding Scale	Self-Other Compassion Scale	Other-Self Compassion Scale	Self-Self Compassion Scale
SeCS Overall Score	$r=-.118$	$r_s=-.137$	$r_s=-.197$	$r_s=-.162$
SeCS Self-Compassion Score	$r=-.064$	$r_s=-.155$	$r_s=.056$	$r_s=-.006$
SeCS Self-Coldness Score	$r=-.127$	$r_s=.061$	$r_s=-.186$	$r_s=-.158$
SeCS Self-Kindness	$r_s=-.262$	$r_s=-.310$	$r_s=-.235$	$r_s=-.086$
SeCS Common Humanity	$r=-.099$	$r_s=-.013$	$r_s=-.085$	$r_s=-.009$
SeCS Mindfulness	$r=-.066$	$r_s=-.134$	$r_s=-.231$	$r_s=-.323$
SeCS Self-Judgment	$r=-.232$	$r_s=-.082$	$r_s=-.003$	$r_s=-.003$
SeCS Isolation	$r_s=.060$	$r_s=-.079$	$r_s=-.093$	$r_s=-.078$
SeCS Over-Identified	$r=-.266$	$r_s=.166$	$r_s=.065$	$r_s=.113$
Fear of Compassion from Others	$r=-.398^*$	$r_s=-.179$	$r_s=-.165$	$r_s=-.076$
Fear of Compassion for Others	$r=-.227$	$r_s=-.250$	$r_s=-.143$	$r_s=.040$
Fear of Compassion for Self	$r=-.230$	$r_s=-.341$	$r_s=-.208$	$r_s=.033$
CTQ Emotional Abuse	$r=-.344$	$r_s=-.286$	$r_s=.238$	$r_s=.266$
CTQ Physical Abuse	$r=-.441^*$	$r_s=.504^{**}$	$r_s=.522^{**}$	$r_s=.324$
CTQ Sexual Abuse	$r_s=.324$	$r_s=-.298$	$r_s=.304$	$r_s=-.462^*$
CTQ Emotional Neglect	$r=-.203$	$r_s=.409^*$	$r_s=.347$	$r_s=.291$
CTQ Physical Neglect	$r=-.138$	$r_s=-.111$	$r_s=.173$	$r_s=.140$
Attachment Anxiety	$r=-.202$	$r_s=-.018$	$r_s=.067$	$r_s=-.009$
Attachment Avoidance	$r=-.103$	$r_s=-.053$	$r_s=-.024$	$r_s=.110$

* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

Table 6: Post Hoc Analyses - Correlations between the SeCS and CTQ Subscales

(n=26)	CTQ Emotional Abuse	CTQ Physical Abuse	CTQ Sexual Abuse	CTQ Emotional Neglect	CTQ Physical Neglect
SeCS Overall Score	$r_s = -.061$	$r_s = -.195$	$r_s = -.126$	$r_s = -.241$	$r_s = -.022$
SeCS Self-Compassion Score	$r_s = .124$	$r_s = -.182$	$r_s = .107$	$r_s = -.184$	$r_s = -.73$
SeCS Self-Coldness Score	$r_s = -.381$	$r_s = -.018$	$r_s = -.380$	$r_s = -.142$	$r_s = .062$
SeCS Self-Kindness	$r_s = -.091$	$r_s = -.168$	$r_s = -.027$	$r_s = -.433^*$	$r_s = -.094$
SeCS Common Humanity	$r_s = .117$	$r_s = -.276$	$r_s = .002$	$r_s = -.202$	$r_s = -.232$
SeCS Mindfulness	$r_s = .249$	$r_s = -.073$	$r_s = .148$	$r_s = .004$	$r_s = .042$
SeCS Self-Judgment	$r_s = -.242$	$r_s = -.049$	$r_s = -.137$	$r_s = -.083$	$r_s = .072$
SeCS Isolation	$r_s = -.392^*$	$r_s = -.022$	$r_s = -.321$	$r_s = -.332$	$r_s = -.003$
SeCS Over-Identified	$r_s = -.134$	$r_s = -.035$	$r_s = -.232$	$r_s = .334$	$r_s = .062$

* = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$

CHAPTER 3

ADVANCED CLINICAL PRACTICE I: REFLECTIVE CRITICAL ACCOUNT (ABSTRACT ONLY)

Title: The Development of Reflective Functioning within the Therapeutic Context.

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Submitted in partial fulfillment for the degree of Doctorate in Clinical Psychology (D.Clin.Psy)

Abstract

Given early on in training the predominance of my placement experiences were in direct clinical work, I have had the opportunity to move from being reflective to both reflective and reflexive in my appraisals within this context. I have come to appreciate it is the reflexive use of my understanding of mental states (intentions, feelings, thoughts and desires) in making sense of, and anticipating, both my own and clients' actions that can aid clinical processes. At the same time I have also come to appreciate the disparity between the capacity to engage in reflective functioning and an ability to fully utilise this in the therapeutic context, in addition to coming to appreciate the processes that can both enhance and block this. Increased awareness and a desire to challenge my own disparity during training has led to a number of important learning opportunities. This account maps out the iterative process I underwent whilst working towards full utilisation of this capacity clinically and makes reference to Stoltenberg and Delworth's developmental model of supervision (1987). Given reflective functioning is a developmental process that is interpersonal in nature I specifically focus on the self-other awareness continuum of this model. I map out my developmental trajectory by first detailing my evolving understanding of mentalisation and its applications clinically, whilst offering my reflective and/or reflexive appraisals of this. I then detail the development and application of my evolving capacity through use of specific case examples. I then go on to consider how to continue to develop and extend this skill beyond training. I feel this iterative process has developed my competencies within the areas of ethics, communication and clinical practice, highlighted as being crucial professional competencies in various key documents (e.g. British Psychological Society, 2009, 2002; Health and Care Professions Council, 2012).

CHAPTER 4

ADVANCED CLINICAL PRACTICE II: REFLECTIVE CRITICAL ACCOUNT

(ABSTRACT ONLY)

Title: Reflections on the Process of Engaging Individuals with Complex Trauma in Exploring their Experiences of Compassion.

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Submitted in partial fulfillment for the degree of Doctorate in Clinical Psychology (D.Clin.Psy)

Abstract

There is emerging research exploring the role of transdiagnostic processes underpinning recovery in complex mental health difficulties, with the application of novel methods to investigate such processes. One doctoral level major research study, in combination with my own, formed a wider study that focused on this area. Each study employed common measures but asked different research questions and recruited different participant groups. I recruited participants with a history of complex trauma and was specifically interested in investigating the role of compassion in the recovery process. As part of addressing this, I engaged participants with complex trauma in a narrative interview exploring their experiences of compassion after agreeing upon a shared understanding of the concept. Developing a narrative means of measuring compassion was felt to have important research and clinical implications given research shows individuals with complex mental health difficulties can find it difficult to identify compassion within themselves (Laithwaite et al., 2009). Given the evolving process of developing and applying the compassion interview for my research study, I felt that writing an account of this experience would help to crystallise my learning. The compassion interview is a novel tool, which aims to develop and extend existing psychological methods, concepts, models, theories and instruments in psychology. In this way the reflective account maps out my development and learning within the research and evaluation competency framework highlighted as being important competencies to attain in several key professional documents (e.g. British Psychological Society, 2002, 2009; Health and Care Professions Council, 2012). During the process of developing and applying the compassion interview, it became increasingly apparent to me that clinical and research competencies sit together rather than being completely segregated. This growing appreciation is also reflected upon in this account.

Appendix 1.1

Submission Guidelines for Journal of Development and Psychopathology, retrieved 25th September 2013

Development and Psychopathology strongly encourages contributions from a wide array of disciplines because an effective developmental approach to psychopathology necessitates a broad synthesis of knowledge. Manuscripts will be considered that address, for example, the causes and effects of genetic, neurobiological, biochemical, cognitive, or socioemotional factors in developmental processes with relevance to various risk or psychopathological conditions. The journal also seeks articles on the processes underlying the adaptive and maladaptive outcomes in populations at risk for psychopathology.

Manuscript Review Policy

Manuscripts will have a blind review by at least two scholars. Every effort will be made to notify authors within 90 days of submission concerning the reviewers' recommendations and comments. *Development and Psychopathology* has no page charges.

Manuscript Submission and Review

All manuscript submissions to *Development and Psychopathology* must be made electronically via ScholarOne Manuscripts:

<http://mc.manuscriptcentral.com/dpp>

Please follow the complete instructions on this website to avoid delays. The instructions will prompt the author to provide all necessary information, including the corresponding author's contact information, which includes complete mailing address, phone and fax numbers, and an e-mail address. The website also requests suggested reviewers. The website will automatically acknowledge receipt of the manuscript and provide a manuscript reference number. The Editor-in-Chief will assign the manuscript to an Editor who will choose at least two other reviewers. Every effort will be made to provide the author with a rapid review. If the Editor requests that revisions be made to the manuscript before publication, a maximum of 3 months will be allowed for preparation of the revision. For additional information on the new online submission and review system, please read the Tutorial for Authors or the Tutorial for Reviewers available from ScholarOne Manuscripts.

Manuscript Preparation and Style

General. All manuscripts must be provided in MSWord or PDF format in 12-point type with 1-in. margins on all sides. The entire manuscript must be double-spaced and numbered consecutively. The language of publication is English.

Style and Manuscript Order. Follow the general style guidelines set forth in the *Publication Manual of the American Psychological Association* (5th ed.). The Editor may find it necessary to return manuscripts for reworking or retyping that do not conform to requirements. Do not use embedded references, end notes, or bookmarks. Manuscripts must be arranged in the following order:

Title Page (page 1). To facilitate blind review, all indication of authorship must be limited to this page; other pages must only show the short title plus page number at the top right. The title page should include the (a) full article title; (b) name and affiliations of all authors; (c) acknowledgments; (d) mailing address and telephone number of the corresponding author; (e) address of where to send offprints, if different from the corresponding author; and (f) a short title of less than 50 characters.

Acknowledgments (page 1). These should be placed below the affiliations. Use this section to indicate grant support, substantial assistance in the preparation of the article, or other author notes.

Abstract Page (page 2). Include (a) a full article title, (b) an abstract of no more than 200 words, and (c) up to five keywords for indexing and information retrieval.

Text (page 3). Use a standard paragraph indent. Do not hyphenate words at the ends of lines or justify right margins.

References. Bibliographic citations in the text must include the author's last name and date of publication and may include page references. Examples of in-text citation style are Cicchetti (2002), Durston (2008, pp. 1133–1135), Hunt and Thomas (2008), (Hunt & Thomas, 2008), (Posner, Rothbart, Sheese, & Tang, 2007), and subsequently (Posner et al., 2007). If more than one, citations must be in alphabetical order. Every in-text citation must be included in the reference section; every reference must be cited in the text. Examples of reference styles:

Journal Article

Cicchetti, D., & Thomas, K. M. (2008). Imaging brain systems in normality and psychopathology. *Development and Psychopathology*, 20, 1023–1027.

Book

Piaget, J. (1962). *Play, dreams, and imitation in childhood*. New York: Norton.

Chapter in an Edited Book

Gottlieb, G., & Willoughby, M. T. (2006). Probabilistic epigenesis of psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology* (Vol. 1, 2nd ed., pp. 673–700). New York: Wiley.

Appendix (optional). Use only if needed.

Tables. Tables must appear as a unit following the reference section. Each table should be typed double-spaced on a separate page, numbered consecutively with an Arabic numeral, and given a short title (e.g., Table 5. Comparisons on language variables). All tables must be cited in the text.

Figures. Figures must appear as a unit following the tables. Each figure must be numbered consecutively with an Arabic numeral and a descriptive legend. Legends must be provided separately from the artwork (e.g. Figure 3. The progress in language development). Figures, which are normally in black and white, should be no larger than 6-9 in. and placed within the manuscript file. If authors have print color figures, Cambridge will provide a price quotation for the cost to the author. Online-only color is provided free of cost. Diagrams must be computer generated. All labels and details must be clearly presented and large enough to remain legible at a 50% reduction. Artwork should be identified by figure number and short title. All figures must be cited in the text.

Copyediting and Page Proofs

The publisher reserves the right to copyedit manuscripts to conform to journal style. The corresponding author will receive page proofs for correction of typographical errors only. No rewriting of the original manuscript as submitted is allowed in the proof stage. Authors must return proofs to Cambridge within 48 hr of receipt or approval will be assumed.

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Appendix 1.2

Study ID (Author, title, year of publication, journal title, pages):	
Rationale	
1. Did the study clearly state or describe the aims/hypotheses/questions	
Sampling	
2. Was the sample group: a) a convenience sample (e.g. clinic attenders, referred patients) b) a geographical cohort (e.g. all participants eligible in a particular area) c) highly selective (e.g. volunteers)	
3. Was the sample size stated?	
4. Was a power calculation carried out?	
5. Were the following characteristics of participants with a history of childhood sexual abuse described adequately? a) age b) gender c) race d) education level e) economic status f) employment status g) location of recruitment site h) marital status i) parental status	
6. Did the sample group consist of: a) participants with a history of childhood sexual abuse b) participants with a history of childhood sexual abuse and their child/children	
7. Were participants with a history of childhood sexual abuse recruited from within: a) a patient population b) a non-patient population c) both a patient and non-patient population	
8. If participants were recruited from within a patient population was the type of service recruited from detailed?	
9. Was the definition used for sexual abuse clearly stated as well as any associated inclusion or exclusion criteria	
10. Were the following features of the sexual abuse described adequately: a) age of onset of abuse b) duration of abuse c) frequency of abuse d) identity of abuser e) severity of abuse f) number of abusers	
11. Was a control group included?	
12. Were inclusion and exclusion criteria clearly stated?	
13. a) Was missing data adequately explained? b) Were the characteristics of those not taking part noted?	

Blinding	
14. Were AAI raters blind to study aims and objectives?	
15. Were methods of rater blinding described?	
16. Were AAI raters trained and registered?	
Measures	
17. Were the AAI subscales described?	
18. Was inter-rater reliability AAI ratings reported?	
19. For participants who had experienced sexual abuse, was this established independent of the AAI?	
20 a) Were there any other measures used? b) Were they described? c) Was the reliability and validity of each measure provided?	
Procedure	
21. Were the procedures described in enough detail to be replicable?	
Design	
22. Was the study design appropriate to address/test the aims/hypotheses/questions?	
Analysis	
23. Were the analyses planned?	
24. Was the analysis appropriate to the study aims/ hypotheses/questions, design and type of outcome measures?	
25. Were the results reported clearly?	
26. Were effect sizes (incl correlations) and confidence intervals reported?	
27. Were additional analyses justified?	
28. Was there sufficient statistical power to enable specific analyses?	
29. Was data for participant group/s presented and summarised?	
30. For the proportion of the sample that experienced sexual abuse, were their primary, and if applicable, secondary AAI classifications stated?	
31. If participants were assigned a U classification, was it clear whether this was for abuse or loss?	
32. If U for abuse was assigned, was it clear whether this was for sexual abuse or for sexual abuse in combination with other forms of abuse?	
33. Was analysis conducted according to participant group/s?	
34. Were 3, 4 and 5 way analyses completed on the AAI data?	
35. For participants who experienced sexual abuse, were appropriate analyses conducted on their primary, and if applicable, secondary AAI classifications?	
36. For the proportion of the sample that experienced sexual abuse, were other types of trauma adequately controlled for?	
37. Was it made clear how U classifications were analysed?	
38. Were U classifications for abuse and loss analysed separately?	
39. Were U classifications for sexual abuse analysed separately?	
40. Were HH codings reported?	
41. Were Reflective-Self Function codings reported?	
Results and discussion	
42. Were the findings clearly summarised and linked back to the	

study aims/hypotheses/questions?	
43. Were the findings interpreted and discussed in relation to previous findings and relevant theory?	
44. Were implications for future research/clinical practice considered in the context of the findings?	
45. Were study limitations discussed?	
Funding	
46. Was the source of funding and other support as well as role of funders detailed?	

Scoring Guidelines:

The ratings should consist of yes, yes but briefly, unclear, not applicable, no or a specific answer to the question. A rating of yes scores 1 point, yes but briefly scores 0.5 points and unclear or no scores 0 points. Where na is assigned 1 point is subtracted from the overall score so that the overall rating is not affected. Questions requiring specific answers (n=3) will not be included in scoring.

Overall ratings should be converted into a % score.

90-100% scores are considered to be excellent.

75-89% scores are considered to be good.

60-74% scores are considered to be moderate.

40-59% scores are considered to be poor.

Appendix 2.1

Submission Guidelines for Journal of Clinical Psychology, retrieved 25th September 2013

Author Guidelines

Manuscript Submission

Manuscripts for submission to *The Journal of Clinical Psychology* should be forwarded to the Editor as follows:

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2. Go to the URL <http://mc.manuscriptcentral.com/jclp>
3. Register (if you have not done so already).
4. Go to the Author Center and follow the instructions to submit your paper.
5. Please upload the following as separate documents: the title page (with identifying information), the body of your manuscript (containing no identifying information), each table, and each figure.
6. Please note that this journal's workflow is double-blinded. Authors must prepare and submit files for the body of the manuscript that are anonymous for review (containing no name or institutional information that may reveal author identity).
7. All related files will be concatenated automatically into a single .PDF file by the system during upload. This is the file that will be used for review. Please scan your files for viruses before you send them, and keep a copy of what you send in a safe place in case any of the files need to be replaced.

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All *Journal of Clinical Psychology: In Session* articles are published by invitation only. Individuals interested in nominating, organizing, or guest editing an issue are encouraged to contact the editor-in-chief:

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E-mail: farber@exchange.tc.columbia.edu

Manuscript Preparation

Format . Number all pages of the manuscript sequentially. Manuscripts should contain each of the following elements in sequence: 1) Title page 2) Abstract 3) Text 4) Acknowledgments 5) References 6) Tables 7) Figures 8) Figure Legends 9) Permissions. Start each element on a new page. Because the *Journal of Clinical Psychology* utilizes an anonymous peer-review process, authors' names and affiliations should appear ONLY on the title page of the manuscript. Please submit the title page as a separate document within the attachment to facilitate the anonymous peer review process.

Style . Please follow the stylistic guidelines detailed in the *Publication Manual of the American Psychological Association, Sixth Edition*, available from the American Psychological Association, Washington, D.C. *Webster's New World Dictionary of American English, 3rd College Edition*, is the accepted source for spelling. Define unusual abbreviations at the first mention in the text. The text should be written in a uniform style, and its contents as submitted for consideration should be deemed by the author to be final and suitable for publication.

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Title Page . The title page should contain the complete title of the manuscript, names and affiliations of all authors, institution(s) at which the work was performed, and name, address (including e-mail address), telephone and telefax numbers of the author responsible for correspondence. Authors should also provide a short title of not more than 45 characters (including spaces), and five to ten key words, that will highlight the subject matter of the article. Please submit the title page as a separate document within the attachment to facilitate the anonymous peer review process.

Abstract. Abstracts are required for research articles, review articles, commentaries, and notes from the field. A structured abstract is required and should be 150 words or less. The headings that are required are:

Objective(s): Succinctly state the reason, aims or hypotheses of the study.

Method (or Design): Describe the sample (including size, gender and average age), setting, and research design of the study.

Results: Succinctly report the results that pertain to the expressed objective(s).

Conclusions: State the important conclusions and implications of the findings.

In addition, for systematic reviews and meta-analyses the following headings can be used, Context; Objective; Methods (data sources, data extraction); Results; Conclusion. For Clinical reviews: Context; Methods (evidence acquisition); Results (evidence synthesis); Conclusion.

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Article Types

- **Research Articles** . Research articles may include quantitative or qualitative investigations, or single-case research. They should contain Introduction, Methods, Results, Discussion, and Conclusion sections conforming to standard scientific reporting style (where appropriate, Results and Discussion may be combined).
- **Review Articles** . Review articles should focus on the clinical implications of theoretical perspectives, diagnostic approaches, or innovative strategies for assessment or treatment. Articles should provide a critical review and interpretation of the literature. Although subdivisions (e.g., introduction, methods, results) are not required, the text should flow smoothly, and be divided logically by topical headings.
- **Commentaries** . Occasionally, the editor will invite one or more individuals to write a commentary on a research report.
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Editorial Policy

Manuscripts for consideration by the *Journal of Clinical Psychology* must be submitted solely to this journal, and may not have been published in another publication of any type, professional or lay. This policy covers both duplicate and fragmented (piecemeal) publication. Although, on occasion it may be appropriate to publish several reports referring to the same data base, authors should inform the editors at the time of submission about all previously published or submitted reports stemming from the data set, so that the editors can judge if the article represents a new contribution. If the article is accepted for publication in the journal, the article must include a citation to all reports using the same data and methods or the same sample. Upon acceptance of a manuscript for publication, the corresponding author will be required to sign an agreement transferring copyright to the Publisher; copies of the Copyright Transfer form are available from the editorial office. All accepted manuscripts become the property of the Publisher. No material published in the journal may be reproduced or published elsewhere without written permission from the Publisher, who reserves copyright.

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Date 22nd February 2013
 Your Ref
 Our Ref
 Direct line 0141 211 2123
 Fax 0141 211 1847
 E-mail Liz.Jamieson@ggc.scot.nhs.uk

Dear Professor Gumley

Study title:	Compassion, memory and coping: A study identifying change processes underpinning recovery
REC reference:	13/WS/0014
IRAS project ID:	114280

Thank you for your letter of 12 February 2013, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered in correspondence by a sub-committee of the REC. A list of the sub-committee members is attached. The Sub Committee commented as follows:

- The Sub Committee noted your response regarding self harm and after discussion agreed as a compromise and in order not to put the research at risk that patients should only be considered for recruitment to the study six months post self harm. The Co-ordinator contacted you and you agreed to this compromise. You then submitted an amended Protocol Version 4.1 dated 22nd February 2013 showing those who were less than six months post self harm would not be recruited to the study.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Mrs Liz Jamieson, Liz.Jamieson@ggc.scot.nhs.uk.

Confirmation of ethical opinion

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

Ethical review of research sites

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

Conditions of the favourable opinion

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

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

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

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

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

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

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

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

Approved documents

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

Document	Version	Date
GP/Consultant Information Sheets	4	08 February 2013
Investigator CV		
Other: Unfavourable Opinion Letter		15 November 2012
Other: Provisional Opinion Letter		15 November 2012
Other: Letter addressing issues from Unfavourable Opinion Letter		11 January 2013
Other: Approval Letter - Erin Toal		14 August 2012
Other: Approval Letter - Emma Rhodes		14 August 2012
Other: CV - Supervisor - Dr H J McLeod		
Other: CV Student - Erin Toal		
Other: CV Student - Emma Rhodes		
Other: CV Student - Gillian Fraser		
Participant Consent Form	4.0	08 February 2013
Participant Information Sheet	4.0	08 February 2013

Participant Information Sheet: Clinical Teams	1	12 February 2013
Protocol	4.1	22 February 2013
Questionnaire: Narrative Interview for Compassion-Revised		
Questionnaire: Coping Inventory for Stressful Situations - Shortened Version		
Questionnaire: Psychosis Attachment Measure		
Questionnaire: How I Typically Act Towards Myself in Difficult Times		
Questionnaire: Fears of Compassion Scales		
Questionnaire: Altman Self Rating Mania Scale		
Questionnaire: HADS		
Questionnaire: Interpersonal Autobiographical Memory Task (I-AMT) Protocol		
Questionnaire: CTQ		
Questionnaire: WTAR Word List		
REC application		09 January 2013
Response to Request for Further Information		12 February 2013

Statement of compliance

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

After ethical review

Reporting requirements

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

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

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

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

13/WS/0014	Please quote this number on all correspondence
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We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

With the Committee's best wishes for the success of this project.

Yours sincerely



Liz Jamieson
Committee Co-ordinator
On behalf of Dr Adam Burnel, Chair

Enclosures List of names and professions of members who were involved in the review.
 'After Ethical Review – Guidance for Researchers'

Copy to: Dr Erica Packard, R&D

West of Scotland REC 3

Sub-Committee of the REC meeting on 28 February 2013

Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Liz Ross	Lay Member	Yes	
Dr Adam Burnel	Consultant Psychiatrist - Chair	Yes	
Mrs Mary Keenaghan	Clinical Auditor	Yes	
Mr Eoin MacGillivray	Retired Dentist	Yes	
Dr Stuart Milligan	Lecturer in Palliative and Cancer Care	Yes	
Dr Stephen Noble	Consultant Anaesthetist	Yes	
Mrs Gillian Notman	Joint Occupational Therapy Lead Advisor	Yes	
Mrs Rosie Rutherford	Lay Member	Yes	

Appendix 2.3



Coordinator/Administrator: Dr Erica Packard/Mrs Elaine O'Neill
Telephone Number: 0141 211 6208
E-Mail: erica.packard@ggc.scot.nhs.uk
Website: www.nhsggc.org.uk/r&d

4 April 2013

Dr Lisa Reynolds
Trauma & Homelessness Team
Carswell House
5/6 Oakley Terrace
Glasgow G31 2HX

NHS GG&C Board Approval

Dear Dr Reynolds,

Study Title:	Compassion, memory and coping: A study identifying change processes underpinning recovery
Principal Investigator:	Dr Lisa Reynolds
GG&C HB site	Trauma & Homelessness Team
Sponsor	NHS Greater Glasgow and Clyde
R&D reference:	GN13CP055
REC reference:	13/WS/0014
Protocol no:	V4.1; 22/02/13
<small>(including version and date)</small>	

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Approval** for the above study.

Conditions of Approval

1. **For Clinical Trials** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004
 - a. During the life span of the study GGHB requires the following information relating to this site
 - i. Notification of any potential serious breaches.
 - ii. Notification of any regulatory inspections.

It is your responsibility to ensure that all staff involved in the study at this site have the appropriate GCP training according to the GGHB GCP policy (www.nhsggc.org.uk/content/default.asp?page=s1411), evidence of such training to be filed in the site file.

Delivering better health

www.nhsggc.org.uk
Page 1 of 2

Board Approval: GN13CP055, Reynolds

2. **For all studies** the following information is required during their lifespan.
- a. Recruitment Numbers on a monthly basis
 - b. Any change of staff named on the original SSI form
 - c. Any amendments – Substantial or Non Substantial
 - d. Notification of Trial/study end including final recruitment figures
 - e. Final Report & Copies of Publications/Abstracts

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Your personal information will be held on a secure national web-based NHS database.

I wish you every success with this research study

Yours sincerely,



Dr Erica Packard
Research Co-ordinator

Cc: Prof Andrew Gumley

Coordinator/Administrator: Dr Erica Packard/Mrs Elaine O'Neill
Telephone Number: 0141 211 6208
E-Mail: erica.packard@ggc.scot.nhs.uk
Website: www.nhsggc.org.uk/r&d

R&D Management Office
Western Infirmary
Tennent Institute
1st Floor 38 Church Street
Glasgow, G11 6NT,

15 March 2013

Dr Rachel Bonney
Clinical Psychologist
Glasgow Addiction Services
Legal House, 101 Gorbals Street
Glasgow G5 9DW

NHS GG&C Board Approval

Dear Dr Bonney,

Study Title:	Compassion, memory and coping: A study identifying change processes underpinning recovery
Principal Investigator:	Dr Rachel Bonney
GG&C HB site	Glasgow Addiction Services
Sponsor	NHS Greater Glasgow and Clyde
R&D reference:	GN13CP055
REC reference:	13/WS/0014
Protocol no:	V4.1; 22/02/13
(including version and date)	

I am pleased to confirm that Greater Glasgow & Clyde Health Board is now able to grant **Approval** for the above study.

Conditions of Approval

1. **For Clinical Trials** as defined by the Medicines for Human Use Clinical Trial Regulations, 2004
 - a. During the life span of the study GGHB requires the following information relating to this site
 - i. Notification of any potential serious breaches.
 - ii. Notification of any regulatory inspections.

It is your responsibility to ensure that all staff involved in the study at this site have the appropriate GCP training according to the GGHB GCP policy (www.nhsggc.org.uk/content/default.asp?page=s1411), evidence of such training to be filed in the site file.

Delivering better health

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Page 1 of 2

BoardApproval_GN13CP055_Bonney

2. **For all studies** the following information is required during their lifespan.
- a. Recruitment Numbers on a monthly basis
 - b. Any change of staff named on the original SSI form
 - c. Any amendments – Substantial or Non Substantial
 - d. Notification of Trial/study end including final recruitment figures
 - e. Final Report & Copies of Publications/Abstracts

Please add this approval to your study file as this letter may be subject to audit and monitoring.

Your personal information will be held on a secure national web-based NHS database.

I wish you every success with this research study

Yours sincerely,



Dr Erica Packard
Research Co-ordinator

Cc: Prof Andrew Gumley



Compassion, memory and coping: A study identifying change processes underpinning recovery

STUDY INFORMATION SHEET (FOR CLINICAL TEAMS)

(Version 1, 12TH February 2013)

Chief Investigator:

Professor Andrew Gumley

Professor of Psychological Therapy & Honorary Consultant Clinical Psychologist, Mental Health and Wellbeing, Institute of Health and Wellbeing, University of Glasgow, Gartnavel Royal Hospital, Glasgow, G12 0XH.

Email: andrew.gumley@glasgow.ac.uk

Tel: 0141 211 3927

This study is designed to investigate compassion, memory, and coping in people who have experienced complex mental health problems. This kind of research will help mental health services to understand the needs of people who have experienced complex mental health problems, and to develop new psychological therapies that aim to help people recover. We are recruiting three groups of participants:

Complex Trauma (target recruitment $n = 15$)

- a) Participants who have experienced complex trauma will be recruited from mental health, trauma and addictions services in NHS GG&C.
- b) Individuals must be aged 16 to 64 years.

Schizophrenia Spectrum Disorder (target recruitment $n = 15$)

- a) Individuals will be eligible if they meet ICD-10 criteria for schizophrenia spectrum disorders (i.e. schizophrenia, schizoaffective disorder, other nonaffective psychotic

disorders, schizotypal personality disorder, paranoid personality disorder).

- b) Individuals will be aged between 16 to 64 years.

Bipolar Disorder (target recruitment n = 15)

Exclusion Criteria:

- a) Individuals diagnosed with ICD-10 Bipolar Disorder who also meet the following criteria will be recruited from community mental health teams.
- b) Individuals will be aged 16 to 64 years.

Exclusion Criteria:

- a) If the severity of individuals' symptoms impairs their ability to participate in the study as judged by the clinical team.
- b) Individuals who have a diagnosis of a neurological condition that would affect cognitive functioning (e.g. dementia, head injury requiring hospital treatment).
- c) Individuals who have been identified as having an Intellectual Disability or Autistic Spectrum Disorder.
- d) As this study makes use of narrative data, people who are not proficient in English language will not be included.
- e) Individuals who are deemed to be intoxicated or under the influence of alcohol/illegal drugs will be excluded.
- f) Individuals who are legally bound to attend an inpatient/outpatient setting for treatment will not be eligible to participate in the study.
- g) Individuals who have been discharged from inpatient psychiatric care in the previous two weeks will not be eligible for inclusion.
- h) Individuals who have had attempted suicide or deliberate self-harm in the previous two weeks will not be eligible for inclusion.

Contact for Further Information

If you have any questions you would like to ask, please do not hesitate to get in contact.

Researchers

Ms Erin Toal

Trainee Clinical Psychologist

Mental Health and Wellbeing

University of Glasgow
Gartnavel Royal Hospital
Glasgow G12 0XH
Tel: 0141 211 0607

Email: erin.toal@ggc.scot.nhs.uk

Thank you for taking time to read this

Appendix 2.5



**Compassion, memory and coping: A study identifying change processes
underpinning recovery**

PARTICIPANT INFORMATION SHEET

(Version 4, 8th February 2013)

Chief Investigator:

Professor Andrew Gumley

Professor of Psychological Therapy & Honorary Consultant Clinical Psychologist, Mental Health and Wellbeing, Institute of Health and Wellbeing, University of Glasgow, Gartnavel Royal Hospital, Glasgow, G12 0XH.

Email: andrew.gumley@glasgow.ac.uk

Tel: 0141 211 3927

Invitation to Participate in a Research Project

What is the research about?

This study is designed to investigate compassion, memory, and coping in people who have experienced complex mental health problems. This kind of research will help mental health services to understand the needs of people who have experienced complex mental health problems, and to develop new psychological therapies that aim to help people recover. The study is being undertaken as part of the fulfillment for an academic qualification (Doctorate in Clinical Psychology).

Who is being asked to take part?

We are asking people who have difficulties with their mental health to take part in the study.

Why have I been asked to take part?

A member of the mental health team responsible for your care (e.g. Consultant Psychiatrist, Clinical Psychologist or CPN) has suggested that you might be interested in participating in this study.

What do you mean by the term 'compassion'?

By compassion we mean expression of kindness, warmth, care, understanding and empathy for ourselves and others. It means having an understanding and feeling moved to help and support ourselves and others.

What are you asking me to consent to?

Consenting to participate in this study means that you will meet with a researcher in a suitable venue and complete an interview and some questionnaires. Your case notes will also be examined to obtain information about your age, diagnosis, number of hospitalisations, and duration of illness.

What will I be asked to do if I agree to take part?

The first meeting is an opportunity for you to ask questions about the study and discuss taking part. This will be arranged at a time and place, which is convenient to you and the researcher.

If you decide to participate, you will complete an assessment interview that asks about your memory for positive and negative experiences. A second interview will ask about your experiences of compassion. These interviews will be audio recorded and then transcribed so that they can be analysed by the researchers. Finally we will ask you to complete 8 questionnaires.

The interviews may prompt you to remember positive experiences as well as upsetting experiences from the past but we will not deliberately ask you embarrassing or upsetting

questions. Also, you do not have to talk about the experiences that come to mind if you do not want to.

The measures required for this study will take up to 2½ hours to complete. We can arrange to meet with you over two or three occasions, depending on your preferences, to complete measures. You will be able to discuss this with the researcher and choose how you would like to divide up the assessment process. You will be able to take as many breaks as you like and refreshments will be available at these times. You will also receive a one-off £10 payment to compensate you for your time and inconvenience. Following your participation, you will receive a courtesy phone call to thank you for your contribution, confirm that you have not experienced any undue distress following participation, and to answer any further questions you may have about the research.

Will my information be confidential?

All the information you provide will be treated confidentially and the research questionnaires will only be identified by a code, [not your name](#). All recordings, transcripts and other data will be stored in a password-protected computer. The interview will be fully anonymised when it is transcribed by the researcher who interviews you. This means that it will not include your name, the names of people, schools or jobs you may mention or any other information which could identify you. Only the researcher who interviews you will hear the original recording. Once the interview is transcribed, the recorded audio copy will be destroyed. The transcribed and anonymised interview and questionnaires will then be analysed by the research team. If you agree, we may use quotations from conversations in reports about this research. The consent forms and study data will be stored on University of Glasgow premises and will be accessible to researchers who are directly involved with the research.

With your permission we will inform your GP and mental health team that you are taking part in the study.

If you share information that makes the researcher concerned for your safety or the safety of other people, we may be required to tell others involved in your care (e.g. your

key-worker or psychiatrist). We will always make a reasonable attempt to discuss this with you beforehand and explain why we are concerned.

What happens to the consent form?

To ensure anonymity and confidentiality, the consent form will be kept separately from the transcribed interview in a locked filing cabinet within University of Glasgow premises in the department of Mental Health and Wellbeing.

What are the benefits of taking part?

In general, research improves our knowledge of what people's difficulties are and what we can do to help people overcome these and improve people's lives. Your participation will help increase our knowledge of areas and potentially improve treatment for others in the future.

Is there a downside to taking part?

As stated above, in the interview you will be asked to talk about previous experiences you have had, including your experiences of compassion. We do not expect you to be worried or distressed by your participation in the study. A lot of previous research studies have examined people's experiences of compassion and their memory for past events and it is exceedingly rare for bad outcomes or difficulties to occur in people who participate in such research. However, if you have any concerns about what we discuss, you can contact the researcher for more information or address this with your key-worker or another member of your clinical treatment team. Although we do not anticipate that participating in this study will cause you any distress, if this did happen we will help you to access appropriate support if needed.

What happens if I decide not to take part?

Nothing. Taking part is entirely up to you. If you do not wish to take part it will not affect any treatment that you currently receive. Also, if you do decide to take part, you are able to change your mind and withdraw from the study at any time without it affecting your care either now or in the future. The research team will give you at least 24 hours to decide whether you want to take part in the study. If you still want to participate, then we will make arrangements to meet.

Can I change my mind?

Yes. You can change your mind at any time and do not need to give a reason. Your care will not be affected in any way.

What will happen to the results of the study?

The results will be published in a medical journal and through other routes to ensure that the general public are also aware of the findings. You will not be identified in any report/publication arising from this study.

Who is organising and funding the research?

The University of Glasgow.

Who has reviewed the study?

The study has been reviewed by the University of Glasgow to ensure that it meets standards of scientific conduct. It has also been reviewed by the West of Scotland Research Ethics Committee to ensure that it meets standards of ethical conduct.

Can I speak to someone who is independent of the study?

Yes you can. Professor Tom McMillan who is not involved in the study can answer questions or give advice. His telephone number is 0141 211 3920.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions. The contact number is 0141 211 3927.

If you remain unhappy and wish to complain formally, you can do this through NHS Greater Glasgow and Clyde NHS Complaints. Details can be obtained from 0141 201 4500.

Thank you for taking time to read this

Appendix 2.6



**Compassion, memory and coping: A study identifying change processes
underpinning recovery**

CONSENT FORM (Version 4, 8th February 2013)

Researchers: Ms Erin Toal, Ms Gillian Fraser, Ms Emma Rhodes

Supervisors: Professor Andrew Gumley, Dr Hamish McLeod

Local Lead Investigators: Dr Lisa Reynolds, Dr Jaqueline Smith, Dr Rachel Bonney, and Dr Jamie
Kirk

Please write your initials in the appropriate box:

1. I have read the information sheet (Version 4, 8th February). ☐
2. I have had the opportunity to ask questions and to discuss the project. ☐
3. I have received satisfactory answers to the questions. ☐
4. I have received enough information about the study. ☐
5. I understand that I am free to withdraw my participation, at any time,
without having to give a reason, and without affecting my future care? ☐
6. I understand that the interview will be recorded and transcribed and that
following transcription the original recording will be destroyed and all personal
data removed from the transcription. ☐
7. I understand that if I become upset during the research interview the researcher
will help me to access appropriate professional support if this is required. ☐

8. I understand that a member of the research team will examine my case notes to obtain data about my age, diagnosis, number of hospital admissions, and length of illness. ☐

9. I understand that if I say anything that makes the researchers concerned about my safety or the safety of another person this information may be communicated to a third party. I also understand that the research will take reasonable steps to discuss this with me beforehand. ☐

10. I understand that remarks I make may be included in an anonymous form in reports about this research (if you do not consent to this, please leave this box blank). ☐

11. I agree that my GP and the Mental Health Team can be informed that I am participating in the above study. ☐

12. I consent to take part in this research project. ☐

Participant signature:

Date:

Researcher signature:

Date:



Compassion, memory and coping: A study identifying change processes underpinning recovery

DEMOGRAPHIC INFORMATION SHEET

(Version 1, 12TH February 2013)

Gender (please circle):

Male
Female

Participant identification:

Service participant engages with:

Date of birth:

Education (please circle):

Completed primary school
Completed secondary school
Completed college
Completed university

Occupational Status (please circle):

Employed
Unemployed
Student

Appendix 2.8



Mental Health and Wellbeing
Institute of Health and Wellbeing
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow
G12 0XH

Version 4, 8th February 2013

Dear

Compassion, memory and coping: A study identifying change processes underpinning recovery

I am writing to you to inform you that your patient _____ has participated in the above study. This occurred after the referring clinical team judged your patient to be sufficiently well and clinically stable to engage with the research procedure, and after your patient was given information on the study and he/she provided written and informed consent to participate.

The study is principally exploring compassion and metacognition via semi-structured interview and self-report measures. Your patient will meet with the researcher for between one and three occasions to complete the interview and measures. Your patient will not be asked about anything distressing during their participation and it is not expected that the experience will cause distress.

The Chief Investigator is Prof. Andrew Gumley and the other investigators are Trainee Clinical Psychologists: Ms Erin Toal, Ms Gillian Fraser, and Ms Emma Rhodes.

If you have any questions or would like further information on the study please see the contact details below:

Chief Investigator:

Professor Andrew Gumley

Professor of Psychological Therapy & Honorary Consultant Clinical Psychologist, Mental Health and Wellbeing, Institute of Health and Wellbeing, University of Glasgow, Gartnavel Royal Hospital, Glasgow, G12 0XH.

Email: andrew.gumley@glasgow.ac.uk

Tel: 0141 211 3927

Yours sincerely,

Ms Erin Toal

Trainee Clinical Psychologist

Email: erin.toal@ggc.scot.nhs.uk

Appendix 2.9

Narrative Interview For Compassion-Revised**GUIDELINES**

It is expected that some flexibility will be required when administering the narrative interview for exploring compassion. Adhering to these guidelines should, therefore, not be at the expense of demonstrating such flexibility.

Initial phase of the interview: semantic definition of compassion

- It is important in this initial phase to engage the participant with the interview process. Time should be spent putting the participant at ease and allaying any fears with regards to the interview being a test. The interviewer should take a curious stance and convey qualities such as warmth, empathy and respect. The aim is to establish the basis for collaboration during the interview.

Next phase of the interview: episodic accounts of compassion

- Similar to the initial phase of the interview, the interviewer's overall objective should be to give enough support to participants to facilitate their recalling of episodic accounts but to refrain from being too persistent in accessing autobiographical accounts. Give enough support so that the participant develops an understanding of the expectations of the interviewer.
- Give the participant enough time to recall, allow them to think about the question and reassure if it is taking a bit of time.
- An interested silence is warranted when participants indicate by their non-verbal behavior that they are actively thinking through or refining their choices.
- Don't leave participants in silences for very long periods as this will likely make them feel uncomfortable.
- If participants communicate that they cannot come up with an example say that is ok with the interviewers tone making it clear the response is perfectly acceptable.
- If participants change the experience mid-flow the interviewer permits them to do so and does not go back to the original experience described.
- If participants give one specific but poorly elaborated experience or a "scripted" or "general" experience such as "I always give a monthly subscription to charity", the interviewer probes for a second example. Say "*that is a good example I am wondering if you can give me another example that is a more detailed experience of*". The interviewer takes an interested and curious stance when doing this. If another "scripted"/"general" or poorly elaborated experience is offered, or if participants indicate in their response that they wish to stay with the example they have given, the interviewer should be accepting, and move on.

Administration of questions

- The following prompts can helpful in supporting the participant in their recall of their episodic accounts of compassion:
 - *Can you describe the situation?*
 - *When was that?*
 - *Who was there?*
 - *How did you respond?*

- *How did you feel?*

If the interviewer feels more elaboration is needed some more prompts can be given. The prompts should be specific enough so that the participant is not left guessing what the interviewer is looking for. In relation to “self to others” a couple of prompts can be given to encourage full expansion and elaboration. In relation to “others to self” one further prompt can be given. In relation to “self to self” one further prompt can be given. Examples of prompts that can be given:

- *I am interested to know more about that can you tell me a bit more?*
- *I am wondering what makes you say that?*
- The following prompt can be helpful in exploring the participant’s state of mind with regards to the recalled episodic memory:
 - *What is it about your experience that is compassionate for you?*

Winding up phase of the interview

- In the winding up phase the interviewer should ensure the participant is at ease and allay any fears they have with the process they have just engaged in. Again the interviewer should take a curious stance and convey qualities such as warmth, empathy and respect.

INTERVIEW

Initial phase: semantic definition of compassion

“Now I would like us to spend some time exploring your experiences of compassion. It will be helpful to first spend some time in developing a shared understanding of the meaning of compassion. I have some cards here to help us do this”.

This is a collaborative task and therefore should be part of an ongoing discussion. Show two or three cards and invite the participant to compare and contrast the different words. For example *“so the first words we have are what do you think about those?”*

Explore all the words and encourage the participant to identify 3 to 5 that best describe compassion. It is ok if the participant would like more than 5 words in their definition of compassion.

If the participant generates additional descriptions that are not provided on the cards, use a blank card to include this in the card sort exercise.

In the course of the task if it is clear that the participant is struggling to grasp an understanding of compassion provide a definition. *“By compassion we mean expression of kindness, warmth, care, understanding and empathy for ourselves and others. It means having an understanding and feeling moved to help and support ourselves and others”.*

At the end of this initial interview phase ensure the selected cards are clearly laid out in front of the participant and remove the words not selected.

Next phase of the interview: episodic accounts of compassion

“Now that we have a shared understanding of compassion we can go on to explore your experiences of compassion. When exploring your experiences examples can be taken from your most recent or distant past. There are no right or wrong answers here, what counts is your experiences and feelings. When thinking about your experiences and feelings please take your time and keep in mind the words you chose to best encapsulate what compassion means for you” [Point to the selected cards on the table]. “Before starting this I am wondering if you have any questions?”

1) “I wonder if you could tell me about a time when you have expressed or shown compassion to another person?”

Examples of prompts to explore the episodic memory:

- *Can you describe the situation?*
- *When was that?*
- *Who was there?*
- *How did you respond?*
- *How did you feel?*

Examples of more specific prompts for elaboration of the episodic memory if required:

- *I am interested to know more about that can you tell me a bit more?*
- *I am wondering what makes you say that?*

Example of a prompt to explore the state of mind with regards to the recalled memory:

- *What is it about your experience that is compassionate for you?*

2) “Can you tell me about a time that another person expressed compassion towards you?”

Examples of prompts to explore the episodic memory:

- *Can you describe the situation?*
- *When was that?*
- *Who was there?*
- *How did you respond?*
- *How did you feel?*

Examples of more specific prompts for elaboration of the episodic memory if required:

- *I am interested to know more about that can you tell me a bit more?*
- *I am wondering what makes you say that?*

Example of a prompt to explore the state of mind with regards to the recalled memory:

- *What is it about your experience that is compassionate for you?*

3) “Can you tell me about a time where you expressed compassion towards yourself?”

Examples of prompts to explore the episodic memory:

- *Can you describe the situation?*
- *When was that?*
- *Who was there?*
- *How did you respond?*
- *How did you feel?*

Examples of more specific prompts for elaboration of the episodic memory if required:

- *I am interested to know more about that can you tell me a bit more?*
- *I am wondering what makes you say that?*

Example of a prompt to explore the state of mind with regards to the recalled memory:

- *What is it about your experience that is compassionate for you?*

Winding up phase of the interview

*“Is there anything you feel you have learned from the experiences we have talked about?
What are your hopes for the future? I am wondering if you have any questions for me?”*

Participants are given a contact number for the research team and encouraged to feel free to call if they have any questions about the process they have engaged in. Also discussion around supports the participant has already may be appropriate here such as their community psychiatric nurse, partner, keyworker, psychologist etc.

The interviewer now brings the participants attention to other topics before moving on to completing the rest of the questionnaires.

The Process of Selecting Cue Words for the Compassion Interview

A non-clinical sample completed an online survey, so that words deemed to encapsulate the meaning of compassion at the semantic level could be rated to ascertain their face validity. Participants were provided with a definition of compassion and then asked to rate how well they felt 32 words encapsulated compassion, on a five point Likert scale ranging from “not at all” to “very”. The twelve words with the highest ratings were then used in the compassion interview. Table 7 summarises the words that were selected for the compassion interview, and the ratings they achieved.

Table 7: The cue words selected for the compassion interview, along with the mean rating gained on a five-point Likert scale (where 0 = not at all; 5 = very).

Words Selected for the Compassion Interview	Mean Rating
Love	4.82
Acceptance	4.26
Caring	4.98
Understanding	4.62
Sympathy	4.7
Empathy	4.68
Forgiving	4.56
Compassion	4.88
Nurturing	4.88
Warmth	4.86
Kindness	4.86
Soothing	4.82



NARRATIVE COMPASSION SCALE CODING FRAMEWORKS

The frameworks are designed for use by coders trained in the original or revised versions of the narrative compassion scale coding frameworks. The frameworks are not in the public domain. For further information on please contact:

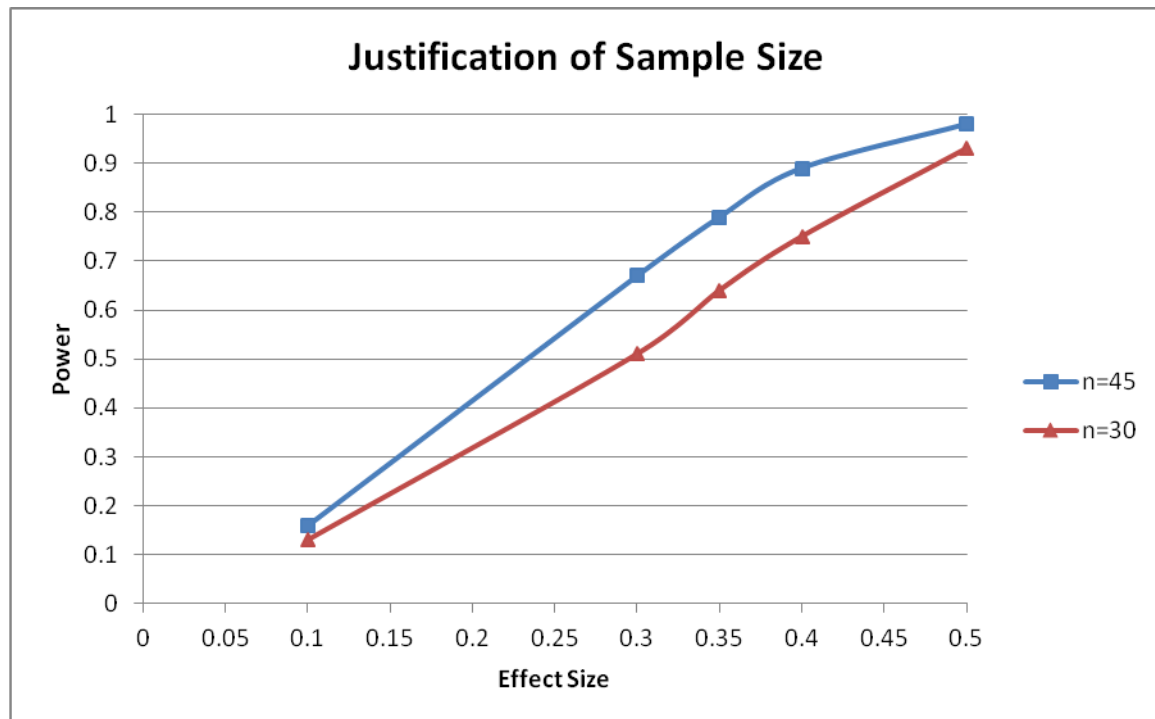
PROFESSOR ANDREW GUMLEY
 Professor of Psychological Therapy
 Head of Mental Health and Wellbeing
 West of Scotland Clinical Lead Scottish Mental Health Research Network
 Editor for Psychology and Psychotherapy: Theory, Research and Practice

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 Email: Andrew.Gumley@glasgow.ac.uk

Institute of Health and Wellbeing
 College of Medical, Veterinary and Life Sciences

Mental Health & Wellbeing Research Group
 University of Glasgow
 Academic Centre
 Gartnavel Royal Hospital
 1055 Great Western Road
 Glasgow
 G12 0XH

Appendix 2.12





DOCTORATE IN CLINICAL PSYCHOLOGY

COVER PAGE

Major Research Project Proposal

“Development and validation of an interview measure for the assessment of compassion in complex mental health difficulties”

Trainee Matriculation No: 0303124

Submission Date: 13th August 2012-Amendments Final Version

Academic Supervisor: Professor Andrew Gumley

Other Supervisor: Dr Hamish McLeod

Field Supervisors:

Dr Rachel Bonney, Glasgow Addictions Services
Dr Lisa Reynolds, Trauma and Homelessness Service
Dr David Wilson, Glasgow Addictions Services

“Development and validation of an interview measure of compassion in complex mental health difficulties”

Abstract

Background: Research suggests that individuals with complex mental health problems may find being compassionate difficult. However having this ability may help them recover from their difficulties. Compassion can be measured via self-report questionnaires or through enquiring about individuals' experiences of compassion. It has been suggested that the latter is a more accurate measure of individuals' abilities, given they can find it difficult to identify compassion in themselves.

Aims: The current study aims to improve on a narrative measure of compassion comparing with self-report measures of compassion. The revised narrative measure will also be compared to scores from a self-report questionnaire measuring childhood trauma. This is of interest as experience of trauma is known to impact on peoples' ability to engage with compassion.

Design: A cross-sectional mixed methods design will be used with a within subject condition and three between subject groups.

Methods: 45 individuals will be interviewed and transcripts coded with the revised narrative measure. Self-report measures of compassion and childhood trauma will also be completed.

Data analyses: Data will be analysed using PASW version 18. Kolmogorov-Smirnov tests will be conducted on appropriate variables to test for normality. The clinical and demographic characteristics of participants will be described as a whole and by diagnostic groups. The reliability and validity of the narrative compassion measure will be explored using Within Groups or Mann-Whitney U tests. Exploration of the construct validity of the narrative compassion measure will be conducted using Pearson or Spearman correlations to explore the relationship between compassionate abilities and childhood trauma.

Implications: Findings will provide further insights into psychological processes that can be addressed within psychotherapy and will facilitate exploration of compassion in complex mental health problems.

1. Background/Introduction

Traditional Cognitive Behaviour Therapies (CBT) focus on the content of thoughts and beliefs and how these relate to emotion and behaviour. However it is now well recognised that for some people, although they can generate alternative more helpful thoughts, beliefs and behaviours to their emotional distress, this is not necessarily accompanied by an alleviation in their distress (Stott, 2007). A person can understand the logic of alternative more helpful thoughts, but may not feel reassured by them (Rector, 2000). Such individuals have been shown to relate to their cognitive experiences in a harsh and aggressive manner. They have what is termed a 'shame focused' mind (Gilbert, 1989, 1998, 2007; Gilbert & Miles, 2000). For these individuals shame and different forms of self-criticism can dominate their inner world and they find it difficult to experience feelings such as kindness, warmth and compassion for the self (Gilbert, 2009a).

The development of these individuals' difficulties can be understood in the context of early development involving attachment relationships, peer relationships and difficult life events such as trauma, separation, illness and loss (Lee, 2005). Consistent with Bowlby's attachment theory, external relationships become internalised over time and Internal Working Models (IWM's) guide how individual's respond to stressful life experiences (Bowlby, 1969, 1973, 1980). For individuals from difficult backgrounds their external relationships and experiences are internalised as forms of self attacking, self-criticism and avoidance (Gilbert 2005a; Lee, 2005; Myin-Germeys & van Os, 2007; Liotti & Gumley, 2009; Gilbert, 2010). Under stress they experience their internal (self-self) and external (other-self) worlds as hostile (Gilbert & Procter, 2006).

According to Social Mentalities Theory humans have evolved mental mechanisms to regulate different types of interpersonal relationships, which are linked to the evolution of attachment systems. Central to this theory is the idea that our sense of self is socially rooted, and therefore reflects internalised representations of external relationships. Thus Social Mentalities Theory conceptualises compassion in evolutionary terms, focusing on the interplay between the caring, social rank and threat based social mentalities, with each mentality thought to be regulated by neurophysiological substrates (Gilbert 1989, 2000, 2005a, 2005b). The Caring Mentality has evolved to attune to and regulate attachment relationships, which involve feelings of closeness, intimacy, sharing and caring (e.g. parent-infant or romantic relationships). Hormones such as opiates and oxytocin have been associated with this affiliation/compassion system and are thought to have a soothing and calming effect (Carter, 1998; Panksepp, 1998; Uväs-Morberg, 1998; Gilbert, 2005a, 2007, 2009b). This social mentality can be distinguished from a Socially Ranked Mentality, which has evolved to manage environmental priorities linked to resource allocation and social hierarchies (Depue & Morrone-Strupinsky, 2005). This mentality is closely linked to relationships that involve attractiveness, rank, dominance, assertiveness, competition, striving and status, and is thought to be underpinned by dopamine, which is arousing and activating (Panksepp, 1998; Gilbert, 2005a; Gilbert & Procter, 2006). Finally the Threat Based Social Mentality has evolved to manage threatening experiences and recruits mental mechanisms orientated

towards the detection and response to threat (Legg & Gilbert, 2006) and it has been proposed that this mentality is underpinned by neurophysiological systems involving serotonin (Gilbert, 2005a; Gilbert & Procter, 2006; Perry et al., 2005). In sum these three social mentality systems are thought to interact and form the basis of interpersonal and affect regulation.

It has been proposed that the lack of exposure to positive affiliative (attachment) relationships limits the opportunity for individuals to have experiences and develop emotional memories of feeling content, soothed and safe (Gerhardt, 2004). This prohibits the full maturation of the Caring Social Mentality, which subsequently compromises these individuals' abilities in understanding and feeling safe in their own emotions (Schoore, 1994; Leahy, 2005). When in times of stress these individuals will not have ready access to emotional memories and capacities for self-soothing to stimulate a felt sense of reassurance and safeness (Brewin, 2006). Traumatic backgrounds sensitise individuals to threats triggering the over stimulation/development of their threat based mentality (Perry et al., 1995; Gerhardt, 2004; Schoore, 2001). The Social Rank Based Mentality is closely implicated with the Threat Based Mentality, given it is best suited to deal with social threats and involves attending to the power of others, to their potential harmfulness or neglect or abandonment. Individuals who have not, therefore, been able to internalise a sense of warmth and felt unloved by others can set out on quests to try and earn their place, becoming excessively seeking, competitive and sensitive to rejection. Thus these individuals have experienced events and relationships that rupture feelings of safeness and compensate for this by overly relying on threat-based strategies to regulate their feelings (e.g. avoidance, self-criticism and self-attack) (Lee, 2005; Gilbert 2005a; Myin-Germeys & van Os, 2007; Liotti & Gumley, 2009). They have learned to notice threats or potential threats quickly and respond with fight, flight, freeze and/or submission (Marks 1987; Gilbert 2001). In addition, these individuals may experience compassion as a form of threat (e.g. "other people are compassionate for exploitative reasons") or view compassion as a sign of weakness (e.g. "being self-critical helps prevent my flaws from showing") (Gilbert et al., 2011).

Compassion Focussed Therapy

An appreciation of these individuals' difficulties has led to the development of Compassion-Focused Therapy (CFT) (Gilbert, 1992, 1997, 2000; Gilbert & Irons, 2005). In CFT the aim is to help individuals move from a self-attacking style to one of self-soothing and compassion. It is with the aim that this style of self-relating will promote recovery and enable individuals to be less critical about themselves and their experiences as well as to feel less shameful about them (Legg & Gilbert, 2006). To help stimulate and develop the compassion/affiliation focused soothing system, CFT defines specific attributes and skills of compassion that can be developed within the therapeutic frame. Compassionate attributes include a care for wellbeing, sensitivity, distress tolerance, sympathy, empathy, attention and taking a non-judgmental stance (Gilbert, 2005, 2009b, 2010). The skills of compassion include creating

feelings of kindness, warmth and support in the work (Gilbert & Procter, 2006; Fehr, Sprecher & Underwood, 2009; Gilbert, 2009b).

A key aspect of the exercises within CFT is the consideration given to compassionate flow. Trower, Casey and Dryden (1988) were the first to propose the concept of flow when assessing evaluations people endorse that can lead to distress in psychotherapy. They argued for the importance of taking account of the direction of evaluations and the implications of this for the therapeutic process. They proposed three possible directions: other-self (the person's perception of how others evaluate them), self-other (the person's evaluation of others) and self-self (the person's evaluation of self). CFT considers this interpersonal evaluative process within the therapeutic frame to deepen understanding as to why individuals' high in shame and self-criticism may find it difficult to self-soothe and be compassionate. CFT organises exercises hierarchically, focusing on expressing compassion towards others, experiencing compassion coming from others, and self-compassion (Neff, 2003a,b; Gilbert, 2009, 2010; Braehler, Gumley, Wallace, Harper & Gilbert, 2012). The rationale for this hierarchical organisation is that compassion can trigger the threat system. Gilbert et al. (2011) recently developed measures of fear of: compassion from others (e.g. "feelings of kindness from others are somehow frightening"); compassion for others (e.g. "if I am kind to others they will take advantage of me"), and compassion for the self (e.g. "being kind to oneself is a weakness"), and were particularly interested in the relationship of these fears to depression. They found evidence of individuals being fearful of engaging in compassionate experiences, and for their student sample, found that in combination with self-criticism, fear of compassion was the most powerful predictor of depression.

The implications of individuals relating to compassion in this way are that they may actively resist engaging in compassionate behaviours or experiences compromising therapeutic outcome (Rockliff, Gilbert, McEwan, Lightman & Glover, 2008; Gilbert 2010; Rockliff, Karl, McEwan, Gilbert, Matos & Gilbert, 2011). In CFT the therapist would, therefore, aim to address these fears, to help individuals move towards cultivating compassion for the self and others (Gilbert et al., 2011). Studies have shown that for a range of mental health difficulties promoting compassion in this way can potentially alleviate psychological distress (e.g. Gilbert & Procter, 2006; Mayhew & Gilbert, 2008; Laithwaite et al., 2009; Braehler, Gumley, Harper, Wallace & Gilbert, 2012; Gale, Goss & Gilbert, submitted; Judge, Cleghorn & Creamer, in preparation; Lucre, in press).

Measurement of Compassion

Compassion has been predominantly measured using self-report methods (Neff, 2003b). In a recent meta-analysis, Macbeth and Gumley (in press) found evidence that greater self-compassion was linked to lower levels of depression, anxiety and stress. However, ratings of self-compassion have been limited to the Neff Self Compassion Scale (Neff, 2003b). Although there was good evidence for reliability and construct validity, self report of compassion in clinical samples may be problematic where individuals might have little experience of compassion or have experience of problematic

attachment relationships. For example, it has been shown that in studies of attachment, individuals who are insecure in their attachment self report as being secure, indeed this is a particular feature of avoidant (insecure) attachment (Riggs et al., 2007). Arguably individuals who are fearful (and avoidant) of compassion may also report themselves as being self-compassionate. Consistent with this, Mayhew and Gilbert (2008) found some inconsistency in the self reports from voice hearers and their ability to engage in compassionate exercises. MacBeth and Gumley (in preparation) addressed this methodological limitation by developing a narrative based measure of compassion and comparing with self-reports in a mixed clinical sample of individuals with psychosis (with or without a history of interpersonal violence) and Borderline Personality Disorder. The study found the scores from the narrative based measure were unrelated to the scores from self-reports (MacBeth & Gumley, in preparation). In a pilot randomised controlled trial of CFT in psychosis, Braehler, Gumley, Wallace, Harper and Gilbert (2012) found that CFT was linked to increased self compassion (when describing experiences of recovery from psychosis) and that improvements in self compassion were significantly correlated with improvements in depression, shame and fear of relapse in the individuals who received CFT but not those who received treatment as usual.

Therefore, this study further develops and extends the narrative compassion interview and coding frame comparing with self-reports. In terms of the compassion interview although MacBeth and Gumley (in preparation) explored social support and coping, compassion was not directly enquired about. The coding framework differentiated self and other related compassion but did not differentiate between compassion flowing from others to self and from self to others. The self and other related compassion scales correlated at above $r = 0.9$ and it was not clear whether this pattern of results arose because the two scales were closely associated or whether the interview was insufficient to differentiate compassion for self and compassion for others.

Thus it is proposed that this study will improve on these limitations. It seeks to develop an interview measure of compassion that asks questions, which directly permit compassion-related discourse. It also seeks to develop the interview and coding frame in such a way that it differentiates compassion flowing from self to others, others to self, and self compassion. The study will recruit a mixed clinical sample of individuals with complex trauma, schizophrenia spectrum disorder, and bipolar disorder to complete self-report measures of compassion and correlate these with narrative coded measures of compassion, with regards to compassion flowing from oneself towards others and as coming from others or from oneself. The narrative measures of compassion will also be compared with scores from the childhood trauma questionnaire, given a significant proportion of the recruited population will have experienced traumatic backgrounds and experience of trauma is known to impact on individuals' ability to engage with compassion. Further refinement of the narrative measure of compassion will provide information as to how useful and robust it is and provide useful tools for researchers and clinicians to apply when working within the field of complex mental health problems.

The application of such tools will facilitate transdiagnostic processes in complex mental health problems.

2. Aims and Hypotheses

The primary aim of this study is to further develop, refine and explore the reliability and validity of the interview based measure of compassion to differentiate compassion flowing from self-to-others (self-others), from others-to-self (others-self) and from self to self (self-self). It is hypothesised that:

- 1) Participants will score significantly higher on self-other compassion compared to other-self compassion.
- 2) Participants will score higher on other-self compassion compared to self-self compassion.

The study also aims to explore the construct validity of the NCCS-R by exploring the following correlations. It is expected that:

- 3) Lower levels of narrative coded compassion will be correlated with higher self ratings of fear of compassion.
- 4) Lower levels of narrative coded compassion will be correlated with lower self ratings of self compassion.
- 5) Lower levels of narrative coded compassion will be correlated with higher levels of childhood trauma.

3. Plan of Investigation

3.1. Participants:

Participants will be under the care of mental health, trauma or addiction services in the NHS Greater Glasgow and Clyde (NHS GG&C) area. Participation will be voluntary, on the basis of an informed consent process. It will be made clear to participants that they can withdraw from the study at any point. Participants will be recruited for the current study at the same time as recruitment for two other major research projects. Each of these studies will employ common measures but ask different research questions and recruit different participants groups. Inclusion and exclusion criteria are described for the three participant groups.

Inclusion Criteria

Complex Trauma

- Participants who have experienced complex trauma will be recruited from mental health, trauma and addiction services in NHS GG&C. Their needs are complex with multiple variability including mental health difficulties, addictions and personality disorder.
- Complex trauma is defined as “*exposure to severe stressors that (i) are repetitive or prolonged (i) involve harm or abandonment by caregivers or other ostensibly responsible adults, and (iii)*

occur at developmentally vulnerable times in the victims life such as early childhood or adolescence” (Courtois, Ford & Herman, 2009). Proposed DSM-V criteria for Complex Post Traumatic Stress Disorder define complex trauma as “protracted exposure to prolonged social and/or interpersonal trauma in the context of either captivity or entrapment (i.e. the lack of a viable escape route for the victim) that results in the lack or loss of control, helplessness, and deformations of identity and sense of self”. Criteria for complex trauma will be determined by the participant’s therapist / clinician.

- Case note diagnosis of individuals’ recruited and current stage of assessment/treatment will be charted by the researcher or relevant staff member to enable the description of particular clinical and demographic information.
- Individuals must be aged 16 and over.
- If individuals are legally bound to attend an inpatient/outpatient setting for treatment they will still be eligible to participate in the study.

Schizophrenia Spectrum Disorder

- Individuals will be eligible if they meet ICD-10 criteria for schizophrenia spectrum disorders (i.e. schizophrenia, schizoaffective disorder, other nonaffective psychotic disorders, schizotypal personality disorder, paranoid personality disorder).
- Individuals will be aged between 16 to 64 years.
- Individuals must be in contact with NHS GG&C mental health services.
- If individuals are legally bound to attend an inpatient/outpatient setting for treatment they will still be eligible to participate in the study.

Bipolar Disorder

- Individuals will meet diagnostic criteria for bipolar disorder.
- Individuals will have experienced their first or second treated episode of mania and/or hypomania in the last 24 months.
- Individuals will be aged 16 years and over.
- Individuals must be in contact with NHS GG&C mental health service.
- If individuals are legally bound to attend an inpatient/outpatient setting for treatment they will still be eligible to participate in the study.

Exclusion Criteria:

- If the severity of individuals’ symptoms impairs their ability to participate in the study as judged by the clinical team.
- Individuals who have a diagnosis of a neurological condition that would affect cognitive

functioning (e.g. dementia, head injury requiring hospital treatment).

- Individuals who have been identified as having an Intellectual Disability or Autistic Spectrum Disorder.
- As this study makes use of narrative data, people who are not proficient in English language will not be included.
- Individuals who are deemed to be intoxicated or under the influence of alcohol/illegal drugs as judged by the clinical team.

3.2. Recruitment Procedures:

Recruitment of participants will be conducted through liaison with NHS GG&C staff from within mental health, trauma and addiction services. Relevant staff members will be approached and asked to facilitate recruitment by identifying suitable participants who meet the inclusion criteria for the study and to provide information on the research project. This will also include discussion with regards to the aims and procedures of the study with potential participants. Participants will be given at least 24 hours to read the information about the study provided to them and to ask the researcher any questions they may have, before their informed consent to participate in the study is requested. Following written informed consent, clinical and demographic information will be gathered from participants before they engage with the study procedures in a venue deemed appropriate by the participant, relevant staff members and research team. After participation the researcher will inform participants' G.P.s of their involvement in the research should they have agreed to this when giving their informed consent.

3.3. Measures:

3.3.1. Narrative Interview for Compassion-Revised (NCS-R, Gumley, Toal, Rhodes, Fraser & MacLeod, unpublished manuscript)

A 30 minute semi-structured interview, which measures participants' experience of self-self, self-other and other-self related compassion. Interview design has been guided by the research team's prior experience and knowledge in conducting narrative based interviews. Guidelines for the interview are provided to ensure consistency of administration across groups.

The initial interview phase is spent developing a shared semantic understanding of compassion with participants. Time will first be spent generating compassionate words through discussion with the research team and ideas generated in the psychotherapy literature (e.g. Mc Ewan, Gilbert and Duarte, 2012). The research team will then recruit people within a two-week window via Survey Monkey to rate the words in order to ascertain face validity. Words achieving highest consensus ratings will then be used to explore with participants who will be asked to select 4/5 that they feel best describes what compassion means for them.

The next phase of the interview will ask that participants' explore their experiences of compassion and to refer to the agreed definition of compassion when recalling these episodic accounts. Participants will be asked to first recall a time that 1) they were compassionate to others 2) others were compassionate towards them and 3) they were compassionate towards themselves. Prompts will be provided to ensure full exploration of participant's compassionate experiences. The prompts serve two purposes to a) exhaust the memory of the experience the participant is recalling and b) tap in to the participant's state of mind with regards to the recalled memory. Participants will be informed that they will not be expected to speak about a traumatic experience or one that distresses them. They will also not be expected to reflect on their accounts if they do not wish to.

3.3.2. Further Revision of the Narrative Compassion Coding System - Revised (NCCS-R, Gumley & MacBeth, unpublished manuscript)

The researcher will transcribe the interview and then score it by applying a further revision to the NCCS-R. The coding system will enable analysis of the interview through bottom-up analysis of features within the structure of the narrative as well as top down analysis of the emerging themes. Currently the NCCS-R provides an overall compassion score as well as scores for self and other-related compassion based on an 11 point scale from -1 to +9. The -1 score allows for an "Anti-compassionate" rating. A rating of "NI" can be assigned if there is no information available; and "CR (cannot rate)" if there is insufficient evidence for convincing assignment of a rating. An earlier version of the coding frame – Narrative Compassion Scale (NCS) - has been piloted (Braehler, Gumley, Wallace, Harper & Gilbert, 2012). The NCS and NCCS-R are not available in the public domain but are available on request from Professor Andrew Gumley. This study seeks to develop the NCCS-R further by differentiating other related compassion into compassion flowing from self-other and from other-self.

3.3.3. Self-compassion scale (SeCS, Neff, 2003b)

A 26-item self report instrument measuring self-compassion. Gilbert, McEwan, Matos and Ravis (2011) reported results for two subscales, each with 13 items, by summing three factors representing positive self-compassion (self-kindness, common humanity and mindfulness) and three factors representing a lack of self-compassion/self-coldness (self-judgement, isolation and over-identification). Internal consistency for the total score has been shown to be acceptable ($\alpha = .76$), and internal reliability for the self-compassion and self-coldness subscales have been shown to be excellent ($\alpha = .89$ and $\alpha = .93$) (MacBeth & Gumley, in preparation).

3.3.4. Fears of Compassion Scales (Gilbert, McEwan, Matos & Ravis, 2011)

Three self-report measures that measure a fear of: compassion for others (10 items), compassion from others (13 items), and compassion for self (15 items). Development of this measure is in its infancy and more research on its psychometric properties is needed. In a student sample, the

Cronbach's alphas were .72 for fears of expressing compassion for others, .80 for fears of receiving compassion from others, and .83 for fears in giving compassion to self (Gilbert, McEwan, Matos & Ravis, 2011).

3.3.5. Childhood Trauma Questionnaire (CTQ, Bernstein & Fink, 1998)

A 28 item self-report that measures 5 types of maltreatment - emotional, physical, and sexual abuse, and emotional and physical neglect. The CTQ shows good reliability. High internal consistency scores are evident. The coefficients of the 5 types of maltreatment are as follows: sexual abuse (.93-.95), emotional neglect (.88-.92), emotional abuse (.84-.89), physical abuse (.81-.86) and physical neglect (.60-.83) (Bernstein & Fink, 1998).

3.4. Design:

A cross-sectional mixed methods design with a within subject condition and three between subject groups.

3.5. Research Procedures:

After written informed consent has been obtained, as outlined above, participants will meet with the researcher on one occasion, for approximately 2.5 hours. There will be at least one break and participants will be provided with tea and/or coffee and a light snack. Participants will be made aware that they can take breaks as and when needed. The researcher will also use their clinical judgment and suggest breaks are taken if they deem this as necessary, such as if participants are showing signs of being distressed. The narrative interview and self-report measures will be administered. An opportunity will be given for participants to reflect on how they found their experience, as well as being debriefed with regards to the compassion interview and questionnaires by the researcher. Time will also be spent on any concerns participants may have about the research process or material discussed. Information on accessing support will be available to the participants. If it is deemed necessary, and the participant consents to it, the researcher will contact staff involved in the participant's care to ensure provision of the necessary support. The researcher will phone participants if possible following their engagement in study procedures. Information on accessing support will be made available to participants. If deemed necessary and the participant consents to it, the researcher will contact staff involved in the participant's care to ensure provision of the necessary support. However participants will be informed from the outset of the study occasions whereby the researcher might have to break confidentiality due to the duty of care they have to the participant.

3.6. Statistical Analyses:

Data will be analysed using PASW version 18. Kolmogorov-Smirnov tests will be conducted on appropriate variables to test for normality. The clinical and demographic characteristics of

participants will be described as a whole and by diagnostic groups. The primary hypotheses will be tested using Within Groups or Mann-Whitney U tests. The secondary hypotheses will be tested using Pearson or Spearman correlations.

3.7. Justification of Sample Size:

It is not possible to perform a power calculation based on similar research, given the limited research that has been conducted in relation to the aims of this research study. Recruitment will be conducted with two other trainees with the intention that each recruits 15 participants (see Section 3.1). Based on a sample size of 45 and an alpha of 0.05 the power of the study for a small effect size ($r=0.1$) would be 0.16; for a medium effect size ($r=0.3$) would be 0.67; for a medium to large effect ($r=0.35-0.4$) would be 0.79 to 0.89; and for a large effect size ($r=0.5$) would be 0.98. Given that a medium to large effect will provide clinically important implications a sample size of 45 would appear adequate to detect correlations of a moderate to large magnitude. The estimated power of the study based on a sample size of 30 and an alpha of 0.05 was also conducted, in order to provide a range of estimated powers for this study, given the lack of research in this area (Faul, Erdfelder, Buchner & Lang, 2009). With a smaller sample size the power to detect medium effect sizes would be compromised ($r=0.5$). However the power for a larger effect size would be $r=0.75$. Given the pilot nature of the study lower levels of power would be acceptable, given a key aim of the study would be to gain estimations of effect size and sample size for future fully powered studies.

3.8. Settings and Equipment:

The research study will take place in an appropriate clinical interview room within the setting from which participant was recruited. All measures will be completed with pencil and paper except for the compassion interview. Information collected from questionnaires will be securely stored on site premises or coded and entered onto a database on an encrypted laptop. All information will be anonymised. A digital recording device (Sony ICD-PX312) will be used to record the compassion interview. The recording will be transcribed and coded according to further revisions of the guidelines set by Gumley and MacBeth (unpublished manuscript) before being erased in keeping with the confidentiality process. Data collected from the compassion interviews will be stored securely through the use of an encrypted laptop.

4.0. Health and Safety Issues

4.1. Researcher Safety Issues:

Research will be conducted during normal working hours within settings, which are staffed and will be conducted according to local health and safety procedures. The room will be set-up to allow researcher to exit easily and there will be access to a panic alarm system if appropriate. The academic supervisor will be informed of all sessions.

4.2. Participant Safety Issues:

The researcher will be present at all times and will remain vigilant to levels of client distress and incorporate breaks into the testing process as required. Participants will be informed at all stages of recruitment and testing that they can withdraw from the study at any time.

5.0. Ethical Issues

Application for ethical approval will be made to West of Scotland REC. The voluntary nature of the study will be emphasised and participants will be aware that they have the right to withdraw from the study at any time. They will also be informed that withdrawing from the study will not affect the clinical treatment they receive. Participants will be made aware of the sensitive and potentially distressing nature of what will be discussed. Due to the potentially distressing nature of discussions interviews will be conducted in a place where a relevant clinical staff member can be accessed for support. It is estimated that total testing time will come to 2.5 hours. The researcher will ensure regular breaks are provided including tea, coffee and biscuits. The end of the 2.5 hour session will provide the opportunity for the participants to discuss their reflections on the process and for the researcher to debrief them. Information on accessing support will be available to the participants. The researcher will also phone participants following their engagement in study procedures. If it is deemed necessary, and the participant consents to it, the researcher will contact staff involved in the participant's care to ensure provision of the necessary support. However participants will have been informed, from the outset of the study, occasions whereby the researcher might have to break confidentiality due to their duty of care they have to the participant. Recordings from the interviews will be transcribed and stored securely through the use of an encrypted laptop. The original recordings will then be erased. Information from the questionnaires will be stored on site premises or coded and entered onto a database on an encrypted laptop. All information will be anonymised.

6.0. Financial Costs

An annual subscription to the SurveyMonkey gold plan account will be purchased at the cost of £299 to aid the development of the revised version of the narrative interview for compassion. This purchase will also suit the needs of other trainees carrying out projects on the Doctorate in Clinical Psychology programme who will also be able to access this account for their use. The researcher's travel costs will be met through the standard NHS mileage claim form. Participants will be given £10 to subsidise their travel costs equating to an estimated total cost of £150. Fifty CTQs and the associated manual will be purchased at a cost of £143.82. All other self-report measures are free to use. Administrative costs are for envelopes (£7.20), free postage (£6.75), paper (£4.16) and photocopying of up to 200 sheets for self-report measures and other materials (£18). The researcher will borrow the appropriate digital voice recorder (ICD-PX312) with a protective cover and clip-on microphone in

addition to a transcription kit from the university. No other substantive costs are envisaged. The total estimated study cost is estimated to be £628.93.

7.0. Timetable

The aim is to obtain ethical approval in September 2012 and to begin recruitment and assessment during October 2012.

8.0. Research and Clinical Implications

To date most knowledge about individuals' difficulties with affiliative emotions and compassion has come from the attachment literature and clinical observations. To advance research and understanding into the nature of affiliative emotions and compassion requires the processes to be measured. Further revisions of the NCS-R and NCCS-R represents a step towards this and adds to the literature in several ways. The delineation of other-related compassion will offer additional insights into individuals' understanding of their experiences and will deepen knowledge of psychodevelopmental factors that contribute to their difficulties. It is also anticipated further insights into psychological processes that can be addressed in psychotherapy will be gained, which will inform how best to assess, engage and work with individuals to alleviate their psychological distress. This will be particularly applicable for compassion focused approaches. Further refinement of the NCCS-R and NCS-R will provide information as to how useful and robust the narrative measure of compassion is and provide useful tools for researchers and clinicians to apply when working within the field of complex mental health problems. The application of such tools will facilitate transdiagnostic processes in complex mental health problems.

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