EXPLORING THE ASSOCIATION BETWEEN ATTACHMENT AND NARRATIVE COMPASSION IN ADULT MENTAL HEALTH

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CHAPTER 1:

A SYSTEMATIC REVIEW OF EVIDENCE ASSOCIATING ATTACHMENT AND COMPASSION IN ADULTS

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Abstract

Objectives: Attachment insecurity and lower levels of compassion are both linked to psychopathology. There is a growing interest in the foundations of compassionate abilities, which may be rooted in attachment experiences. This systematic review aimed to explore the association between attachment and compassion.

Method: A systematic search was conducted on 18th May 2018 using PsycInfo, Medline, EMBASE, Google Scholar, Psychology and Behavioural Sciences and the Cochrane Library to identify papers that examined any association between attachment and compassion in the past 10 years. Reference lists of identified papers were also searched. Articles were screened for inclusion by scrutiny of abstract and methodology. Findings were synthesised and effect sizes calculated where possible.

Results: Ten studies were identified representing 12 samples. Significant associations were noted between both attachment anxiety and attachment avoidance and lower levels of compassion (M_r = -0.37 and M_r = -0.31) respectively.

Conclusions: Greater attachment insecurity is associated with lower self-compassion. Evidence implicates attachment insecurity and compassion in psychopathology, and well-being. Future work is needed to explore the causal links between different attachment and compassion dimensions.

Introduction

From birth and throughout early development, the relationship between a child and their caregiver influences how that child will go on to relate to others, regulate their emotions and manage emotional experiences. Close bonds are necessary for the child in order to feel safe and secure through being comforted, soothed and protected (Bowlby, 1969/82). The quality of these early relationships, and crucially the reactions of caregivers to the child's care-seeking behaviour, are therefore important and can shape enduring differences in that individual's sense of self and others.

An individual's developmental knowledge of human interactions is conceptualised in Bowlby's attachment theory (Bowlby, 1969/82). Early experiences are internalised and known as Internal Working Models (IWM; Bretherton, 1999) which can influence future interactions and interpersonal relating, including to the self.

In line with Bowlby's theory (1969/82), when things go well in these early relationships, a sense of connectedness and security is promoted by interactions with attachment figures who are responsive and available in times of need, commonly when an individual is in distress. This facilitates optimal development of the attachment system and allows these individuals to depend more readily and confidently on this support as a distress-regulation strategy. If a person's attachment figure is not readily available, or indeed if the response they give is not supportive or soothing, then a sense of security is not developed and secondary strategies that do not rely on proximity seeking are developed in order to regulate emotion. These strategies are largely characterised by avoidance and anxiety.

These differences in the development of attachment systems, i.e. individual's IWM and associated attachment style/classification, were operationalised by Ainsworth in the late

1970s based on the infant's response to separation from its primary caregiver. Three distinct categories were reported; secure, anxious and avoidant (Ainsworth, 1979), similar categories were outlined in adult studies (Hazan and Shaver, 1987). Latterly, studies have shown that attachment styles are more appropriately conceptualised by two continuous dimensions, namely anxiety and avoidance (Bartholomew and Horowitz, 1991; Brennan, Clark and Shaver, 1998) rather than categories.

The attachment anxiety dimension indicates the extent to which an individual is worried that a significant other will not be available in a time of need. This is characterised by fear of interpersonal abandonment and rejection, and distress when an attachment figure is not available or not responsive (Gillath, Shaver, Mikulincer, et al., 2005). The attachment avoidance dimension reflects the extent to which an individual is mistrustful of the attachment figure and how they might respond. As a result they may endeavour to be independent and emotionally distance from others. Wei and colleagues (2007) suggest attachment avoidance is characterised by fear of dependence and intimacy with an excessive need for self reliance.

A growing evidence base suggests a link between attachment style and psychopathology (Dozier, Stovall & Albus 1999; Dozier, Stovall-McClough, & Albus, 2008). A secure attachment has been identified as acting as a buffer against adverse early relational experiences resulting in lower levels of depression than those with insecure attachment and similar psychosocial experiences (Bayer and Sanson, 2003). Bifulco and colleagues (2002) demonstrated associations between insecure attachment styles and vulnerability factors to depression such as poor self-esteem, childhood adversity and poor support.

Caregiving is embedded in the attachment system and is impacted by our past experiences of care and our attachment style (Gilbert, 2005). Compassion shares similarities with care-giving behaviour as both concepts share an empathetic and altruistic stance with the same goal of alleviating distress and providing soothing comfort, including to the self (Gilbert, 2010). Compassion by definition is twofold: a sensitive, caring and warm awareness of pain and suffering experienced by oneself and others; and motivation to appropriately comprehend and alleviate suffering (Gilbert, 2005b). Greater compassion is associated with a range of positive outcomes, including lower psychopathology (MacBeth & Gumley, 2012), fewer mental health issues (Neff & McGehee, 2010), lower levels of depressive and stress symptoms, and increased quality of life (Pinto-Gouveia, Duarte, Matos et al., 2013).

Some literature exists linking attachment experiences, and early relationships with caregivers to compassion (Gilbert, 2005; Gilbert & Procter, 2006; Neff, 2011a). It is surprising that there is not more empirical evidence to clarify the relationship between the two. Moreover, this literature focuses mainly on self-compassion despite there being clear evidence that other flows of compassion exist and are important to our interpersonal and emotional functioning (Gilbert, 2005). Furthermore, studies linking the two concepts seem to be largely focused on child populations, despite adults clearly being affected by both concepts. Moreover, the studies that exist are largely correlational in nature and therefore evidence to suggest causality is limited.

Empirical evidence linking these two concepts has not been drawn together in any systematic way, neither has the quality of relevant studies been scrutinised. Therefore, this review aims to address these issues by seeking to explore the veracity of the proposed association between compassion and attachment in adult populations based on empirical evidence from the last 10 years, including how attachment and compassion are associated,

and the quality of the evidence. The following research questions were formulated prior to undertaking the systematic review:

1. How are attachment and compassion associated?
2. What is the quality of evidence?

Methods

Inclusion and exclusion criteria

Inclusion criteria: Synonyms for compassion (e.g. empathy, sympathy, altruism) were not included in the search terms; only studies using the word compassion or self-compassion were included. Studies were eligible for inclusion if they included an adult sample (over 18), a clearly defined self-report or interview-based measure of compassion, and a validated self-report or interviewer rated measure of attachment style or security was used. The paper had to be published in a peer reviewed journal in English in the last ten years (a time limit from 2007).

Exclusion criteria: Articles were excluded if they did not meet the above criteria or if the study focused on compassion fatigue or fears of compassion, which were deemed conceptually separate and therefore not appropriate to include.

Data source, selection and extraction

A search strategy was used to identify potential articles. The following search terms were used as keyword or heading searches, using a two-component strategy;

1. Attachment

    a. Attachment

2. Compassion

    a. Compassion*

The searches were conducted separately then combined using the Boolean operator 'AND'. This final search strategy was developed with the support of a librarian and was deemed suitable across each of the databases.

The following databases were searched on 16th November 2017 (the search was repeated on 18th May 2018); EMBASE, Medline, PsychInfo, Psychology and behavioural sciences and the Cochrane Library. A time limit from 2007 was used, thus the search included all recent literature published in the last 10 years. In addition, Google Scholar was used to search for peer-reviewed, in press, studies involving compassion available online but not yet indexed on the aforementioned databases. The reference lists in the articles captured in the search were checked to ensure these key articles are included. The results were combined and duplicates removed. The articles were then screened initially for suitability by title and abstract alone. If deemed suitable at the screening stage the articles were then read in full, to assess for inclusion in the review. Each full text paper was considered in line with the inclusion and exclusion criteria. All eligible articles were then reviewed and data were extracted using a bespoke data extraction form. Once the final articles for inclusion were identified, the reference lists of each of these articles were scrutinised and any articles which were of interest were included if appropriate.

Quality Assessment

Due to the emerging nature of the research into the relationship between compassion and attachment and the heterogenous study methodologies, the MMAT (Mixed Methods

Appraisal Tool; Pluye et al., 2009; Appendix 1.2) was used as the basis for developing an assessment tool to extract relevant, methodological data. For this review, the key aspects, which were considered for quality were; sample size; measures used; response/outcome rates, and consideration of confounding variables. Using these four aspects the MMAT gives a score of how many aspects were satisfied and therefore the studies were given a score of 0%, 25%, 50%, 75% or 100%. Greater weighting was given to the results of the studies with higher quality rating. Of the included articles, a subsample were reviewed using the same data extraction form by an additional reviewer in order to establish inter-rater reliability.

Data Synthesis

Effect sizes for correlational data were reported using correlation coefficients (*r*) following Cohen's (1988) recommendations; whereby $r = 0.1$ to 0.23 is equivalent to a small effect size; $r = 0.24$ to 0.36 equivalent to a medium effect; and $r = 0.38$ or larger equivalent to a large effect size. When reporting on Structural Equation Models and Mediation Models the most direct beta coefficients between either attachment anxiety or avoidance and self-compassion were selected and are reported here.

As the results of these studies varied greatly in the characteristics of the participants, the measures used, and the analysis conducted, it was not possible to combine the results of included studies. The narrative synthesis included investigation of the similarities and the differences between the findings of different studies, as well as exploration of patterns in the data. Where there were differences between studies, consideration was given to whether these were due to variability in outcomes, variability in study designs, variability in population or setting, or the use of poor measures.

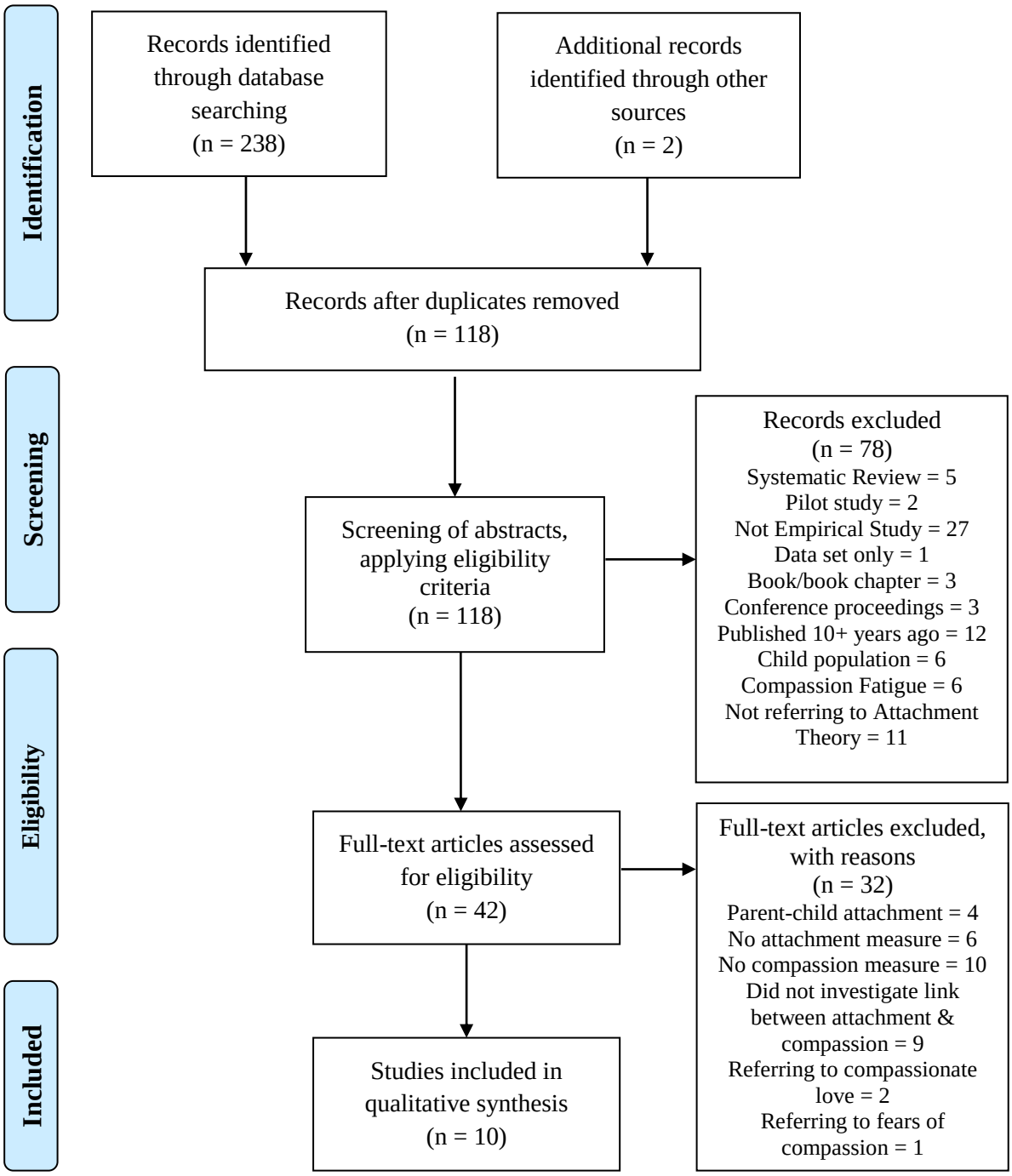
Results

Selection Process, and Study and Participant Characteristics

The initial search generated 238 articles from online databases and from other sources. After duplicates were removed, 118 abstracts were screened using the eligibility criteria at which point 78 were excluded, and 42 full text articles were assessed for eligibility. At this point 32 articles were deemed not eligible; therefore, ten articles were included in this review representing twelve participant samples (Pepping et al., 2015; and Raque-Bogdan et al., 2011 reported data from two independent samples within one paper). This process is described in Figure 1.

These twelve samples (K=12) included eleven cross-sectional studies, and one cohort study comparing an experimental group with a control group (Pepping et al., 2015; study B). The studies represented a total sample of n=3278 of which 73.8% (n=2416) were female. Mean age of participants was 32.73 years of age (SD = 8.72 years; Dudley et al., 2018 did not report SD for their age mean). Age range was 16 – 95, although three studies did not report these (Bistricky et al., 2017; Joeng et al., 2017; and Raque-Bogdan et al., 2016). Participant characteristics, and summary findings are summarised in Table 1.

Figure 1: PRISMA Diagram



Ethnicity characteristics of the sample were reported by all studies bar three (Pepping et al., 2015 both samples; Homan, 2016), representing 15.9% of the individuals in this review. Ethnicity characteristics are summarised in Table 1 in Appendix 1.3.

Measures

The measures used in the studies are summarised and described in Table 2: Attachment Measures and Table 3: Compassion Measures.

Table 1: Participant Characteristics & Summary Findings

Study	Age Range	Age Mean	Age SD	Sample Size	Male	Female	Gender Not Reported	MMAT score	Summary findings of associations between attachment and compassion
Beard et al., 2017	19-82	38.3	11.6	139	139	0	-	75%	Negative correlations between both attachment anxiety (r = -0.47, p<0.01) and avoidance (r= -0.44 , p<0.01) and self-compassion.
Bistricky et al., 2017	NR	35.7	12.2	132	18	114	-	50%	Attachment avoidance (r= -0.45, p<0.001) negatively correlated with self-compassion and within SEM model had a significant direct negative effect on self-compassion (b= –0 .48, p<0.05).
Dudley et al., 2018	18-24	37.6	NR	128	34	94	-	50%	Secure attachment positively correlated (r=0.38, p<0.003) with self-compassion. Fearful attachment negatively correlated with self-compassion (r = -0.42, p<0.003).
Homan, 2016	60-95	70.4	8.1	126	37	89	-	50%	Attachment anxiety (r=-0.60, p<0.01) and avoidance (r= -0.49, p<0.01) negatively correlated with self-compassion.
Joeng et al., 2017	NR	25.3	3.8	473	288	185	-	25%	Self-compassion independently mediated the path from anxious and avoidant attachment to depression and anxiety (b= -0.30, p< 0.001 and b= -0.24, p<0.001).
Mackintosh et al., 2017	18-64	40.3	12	74	26	44	-	50%	Self-compassion correlated with both anxious (r= -0.25, p<0.05) and avoidant (r= -0.26, p<0.05) attachment. In mediation models, avoidant attachment predicted self-compassion (b= -0.10, p=0.04 and b= -0.10, p=0.03).
Pepping et al., 2015	16-55	21.5	6.6	329	88	241	-	25%	Negative correlation between both attachment avoidance (r= -0.19, p<0.001) and anxiety (r= -0.35, p <0.001) and self-compassion.

(Study A)									Attachment anxiety had a direct negative effect on self-compassion within a mediation model of parenting experiences (*b*= -0.28, p<.001).
Pepping et al., 2015 (Study B)	17-56	21.3	8	32	8	24	-	75%	Enhancing attachment security led to a significant increase in state self-compassion (*t*(15) = -2.29, p= .037, d=0 .55)
Raque-Bogdan et al., 2011	18-33	20	1.6	208	44	153	11	25%	Self-compassion correlated with both anxious (*r*= -0.43, p <0.01) and avoidant (*r*= -0.19, p<0.01) attachment. In a mediation model avoidant and anxious attachment significantly predicted self-compassion which mediated reported mental health (*b*= -0.20, p<.001 and *b*= -0.10, p<0.01).
Raque-Bogdan et al., 2016	NR	18.7	2.8	1306	0	1306	-	50%	Significant correlations between types of attachment anxiety (*r*s= -0.17, -0.36, -0.38, all p<0.001) and self-compassion. In mediation models, attachment anxiety had a direct effect on self-compassion (*b*= -0.077, p<0.001 and *b*= -0.069).
Wei et al., 2011 (Study A)	18-42	20.1	2.8	195	86	108	1	50%	Self-compassion correlated with both anxious (*r*= -0.38, p <0.01) and avoidant (*r*= -0.15, p<0.05) attachment. In mediation models, anxious and avoidant attachment significantly predicted self-compassion (*b*= -0.37, p<.001 and *b* = -0.07, p<0.05).
Wei et al., 2011 (Study B)	30-78	43.4	10.2	136	78	58	-	75%	Self-compassion correlated with both anxious (*r*= -0.38, p <0.01) and avoidant (*r*= -0.36, p<0.01) attachment. In mediation models avoidant and anxious attachment predicted self-compassion which mediated subjective well-being (*b*= -0 .29, p<.001 and *b*= -0.24, p<0.01).
Total	**16-95**	**32.7**	**7.2**	**3278**	**846 (25%)**	**2416 (74.6%)**	**12 (0.4%)**		-

Table 2: Summary and Description of Attachment Measures

Measure of attachment	Number of times used	Studies used in	Description	Internal Consistency in current studies
Experiences in Close Relationships Scale (ECR; Brennan, Clark and Shaver, 1998)	3	Homan, 2016 and Wei et al., 2011, study A and B	Two 18-item self-report subscales that measure attachment avoidance and anxiety.	Not reported by Homan, (2016). Wei et al., (2011) reported Cronbach's $\alpha \geq .92$; high internal consistency across both subscales in both studies.
Experiences in Close Relationships – Revised (ECR-R; Fraley, Waller and Brennan, 2000)	3	Mackintosh et al., 2017, Pepping et al., 2015, study A, and Raque-Bogdan et al., 2011	36-item self-report measure assessing romantic attachment across two subscales: anxiety and avoidance.	Across both subscales all studies reported Cronbach's $\alpha \geq .78$; good internal consistency.
Korean Version (Kim, 2004) of Fraley et al., (2000) ECR-R	1	Joeng et al., 2017	Korean version of the ECR-R.	Anxiety subscale: Cronbach's $\alpha = .94$; high internal consistency. Avoidance subscale: Cronbach's $\alpha = .79$; good internal consistency.
The Experience in Close Relationships Scale-Short Form (ECR-S; Wei, Russell, Mallinckrodt & Vogel, 2007)	2	Beard et al., 2017 and Bistricky et al., 2017	12-item self-report measure used to assess the degree of avoidant and anxious adult attachment style tendencies.	Two studies reported Cronbach's $\alpha \geq .81$; high internal consistency.
Experiences in Close Relationships -Relationship Structures Scale (ECR-RS; Fraley, Heffernan, Vicary and	1	Raque-Bogdan et al., 2016	9-item self-report measure assessing attachment patterns in close relationships across two subscales: anxiety and avoidance.	Only anxiety subscale used. Cronbach's $\alpha \geq .88$; high internal consistency.

Brumbaugh, 2011)				
The Relationship Questionnaire (RQ; Bartholomew and Horowitz, 1991)	1	Dudley et al., 2018	A self-report measure of adult attachment comprising four statements describing different attachment styles: secure, dismissing, preoccupied, and fearful rated using a Likert scale.	Internal reliability could not be analysed as each construct contains one item, although past research has found the measure to be reliable and stable over time (Scharfe and Bartholomew, 1994).
State Adult Attachment Measure (SAAM; Gillath, Hart, Noftle and Stockdale, 2009)	1	Pepping et al., 2015 (study B)	21-item self-report measure used to assess change in state attachment, consisting of three subscales: anxiety, avoidance and security.	Across the three subscales at pre and post conditions, Cronbach's $\alpha \geq .84$; high internal consistency.

Table 3: Summary and Description of Compassion Measures

Measure of Compassion	Number of times used	Studies used in	Description	Internal Consistency in current studies
The Self-Compassion Scale (SCS; Neff, 2003)	8	Beard et al., 2017; Dudley et al., 2018; Mackintosh et al., 2017; Pepping et al., 2015 (Study A); Raque-Bogdan et al., 2011; Raque-Bogdan et al., 2016; Wei et al., 2011 (Study A); Wei et al., 2011 (Study B).	26-item self-report measure of compassionate responding to oneself, with six subscales measuring three components of self-compassion.	Across seven studies, Cronbach's $\alpha \geq .91$; high internal consistency. In Mackintosh et al., 2017, Cronbach's $\alpha = .71$; acceptable internal consistency.

Self-Compassion Scale Short Form (SCS-SF; Raes, Pommier, Neff and Van Gucht, 2011)	3	Bistricky et al., 2017; Homan, 2016; and Pepping et al., 2015, Study B	12-item self-report based on SCS measuring components of self-compassion.	Across two studies, Cronbach's $\alpha \geq$ .87; high internal consistency. Homan, 2016 did not report internal consistency.
Korean version (Kim, Yi, Cho, Chai and Lee, 2008) of SCS (Neff, 2003)	1	Joeng et al., 2017	Korean of the SCS.	Cronbach's α = .90; high internal consistency.

Associations between attachment and compassion

Correlations & Effect Sizes

All twelve cohorts reported a significant association between attachment and self-compassion.

Attachment Anxiety: Eight studies representing nine samples (K=9; Beard et al., 2017; Dudley et al., 2018; Homan, 2016; Mackintosh et al., 2017; Pepping et al., 2015, Study A; Raque-Bogdan et al., 2011; Raque-Bogdan et al., 2016; Wei et al., 2011, Study A and B) reported significant negative correlations between attachment anxiety and self-compassion. The effect sizes ranged from small (r = -0.17) to large (r = -0.6) and the mean (r = -0.37) and median (r = -0.37) effect sizes were both medium. Two studies with the highest quality rating given in this review (both 75%; Beard et al., 2017; and Wei et al., 2011, Study B) reported large effect sizes in the association between attachment anxiety and self-compassion (r= -0.47 and r= -0.38).

Attachment Avoidance: Eight studies representing nine samples (K=9; Beard et al., 2017; Bistricky et al., 2017; Dudley et al., 2018; Homan, 2016; Mackintosh et al., 2017; Pepping et al., 2015, Study A; Raque-Bogdan et al., 2011; Wei et al., 2011, Study A and B) reported significant negative correlations between attachment avoidance and self-compassion. The effect sizes ranged from small (r = -0.13) to large (r = -0.49) and the mean (r = -0.31) and median (r = -0.31) effect sizes were medium. Two studies with the highest quality rating given in this review (both 75%; Beard et al., 2017; and Wei et al., 2011, Study B) reported large effect sizes in the association between attachment anxiety and self-compassion (r= -0.44 and r= -0.36).

Structural Equation Modelling (SEM)

Four studies representing five samples (K=5) used SEM and reported beta coefficients.

Attachment Anxiety: Two studies reported three SEM models (K=3; Joeng et al., 2017 and Raque-Bogdan et al., 2016) which reported significant negative effects of attachment anxiety on self-compassion indicating that higher attachment anxiety was associated with lower self-compassion. Of these studies, Raque-Bogdan et al. (2016) had a higher quality rating, 50%, than Joeng and colleagues (2017; 25%). Raque-Bodgan et al. (2016) reported beta coefficients of b = -0.069 and b =-0.077. Joeng et al. (2017) reported a beta coefficient of b = -0.302

Attachment Avoidance: Two studies (K=2; Bistricky et al., 2017 and Joeng et al., 2017) reported avoidant attachment had a significant direct negative effect on self-compassion meaning that greater attachment avoidance was associated with lower self compassion. Of these studies, Bistricky et al. (2017) had a higher quality rating, 50%, than Joeng and colleagues (2017; 25%). Bistricky et al. (2017) reported a beta coefficient of b = -0.475. Joeng et al. (2017) reported a beta coefficient of b = -0.240.

Mediation Models

Six studies used mediation models (ten models in total); eight beta coefficients were reported. One study (Homan, 2016) did not report the statistics of the effects of attachment anxiety and avoidance on self-compassion, although they did state these were significant. Some studies reported attachment and self-compassion variables within mediation models of depression and anxiety (Joeng et al., 2017 and Mackintosh et al., 2017), parenting experiences (Pepping et al., 2015, study A), mental health outcomes (Raque-Bogdan et al., 2011), body appreciation (Raque-Bogan et al., 2016) and subjective well-being (Wei et al., 2011). See Appendix 1.2; Table 2 and 3 for further information.

Attachment Anxiety: Three studies representing four samples (K=4; Pepping et al., 2015, Study A; Raque-Bogdan et al., 2011; and Wei et al., 2011, Study A and B) reported significant negative effects of attachment anxiety on self-compassion. The beta coefficients reported were; b = -0.20, b = - 0.28, b = - 0.29 and b = - 0.37. Of these studies, Wei et al. (2011, Study B) had the highest quality rating (75%), and so their finding of b = - 0.29 may be at less risk of bias.

Attachment Avoidance: Three studies representing four samples (K=4; Mackintosh et al., 2017; Raque-Bogdan et al., 2011; and Wei et al., 2011, Study A and B) reported significant negative effects of attachment avoidance on self-compassion. The beta coefficients reported were; b = - 0.10, b = - 0.10, b = - 0.10 and b = - 0.24. Of these studies, Wei et al. (2011, Study B) had the highest quality rating (75%), and so their finding of b = - 0.24 may be at less risk of bias.

Results from experimental studies

Pepping et al. (2015) reported in study B, that enhancing attachment security led to a significant increase in self-compassion; moderate effect size of d= 0.50. There were not significant changes within their control group. This study was one of the three highest rated studies in this review with a MMAT score of 75%, suggesting lower risk of bias to the results than other studies included in the review.

These findings and their context are summarised in Table 1 and Table 2 in Appendix 1.3.

Quality of Studies

There were substantial sources of bias identified in these papers; suggesting the overall quality of the papers was low and the risk of bias was high. The risk of selection bias was

substantial as the studies represent largely a white (46.5%), female (73.8%), self-selecting (97.7%) population, who were recruited via online adverts (82.8%) which reduces the generalisability of the findings. Furthermore, five studies sampled student populations, representing 35.4% of the total sample (Bistricky et al., 2017; Joeng et al., 2017; Pepping et al., 2015, study A and B; and Wei et al., 2011, study A and B), which raises the risk of bias and further impacts on the generalisability of the findings. The risk of bias was increased further as the majority of studies (K= 9) did not report demographic characteristics clearly and three studies (Homan, 2016 and Pepping et al., 2015 study A and B) did not report ethnicity characteristics of their sample, representing 15.9% of the sample in this review. The design of the studies were largely cross-sectional and therefore there was limited scope to make conclusions regarding the direction of causality.

The quality of the papers was appraised using the MMAT. Three samples (K=3; Joeng et al., 2017, Pepping et al., 2015, Study A, and Raque-Bogdan et al., 2011) scored 25% and therefore were considered lower quality and at a higher risk of bias than other studies. Five samples (K=6; Bistricky et al., 2017; Dudley et al., 2018; Homan, 2016 and Raque-Bogdan et al., 2016) scored 50% and were considered of fair quality and the final three samples (K=3; Beard et al., 2017; Pepping et al., 2015, Study B and Wei et al., 2011, Study B) scored 75% and therefore were judged of the best quality in this review. Greater weighting was given to the findings of these three studies as the risk of bias was judged to be lowest in this review.

A subsample of papers were rated by an independent rater (n=5) on five domains of quality. Overall quality ratings were compared and there was disagreement on two ratings; representing 92% inter-rater reliability. After discussion a consensus was reached on which rating was appropriate.

Discussion

This review sought to explore the association between compassion and attachment in adult populations.

Associations between attachment and self-compassion

With regards to the first research question, all studies found associations between attachment and self-compassion. Across nine samples a medium effect size of both attachment anxiety and avoidance on self-compassion was found (M_r = -0.37, M_r = -0.31 respectively). A similar association of attachment insecurity on self-compassion was reported in results from SEM and mediation models which reported significant direct negative effects of both attachment insecurities on self-compassion.

Greater weighting can be ascribed to three samples that were judged to be higher quality in this review, and therefore at less risk of bias (K=3; Beard et al., 2017; Pepping et al., 2015, Study B, and Wei et al., 2011, Study B). Using correlational analysis, these studies all found significant negative associations between attachment anxiety *and* avoidance and self-compassion. All effect sizes they reported were large which is reflected in the literature by correlations found by Neff & McGehee (2010) that indicated that self-compassion was strongly associated with a secure attachment in young adults attending college. They also found moderate-strong effect sizes between self-compassion and both preoccupied and fearful attachment styles in young adults.

A similar strong link between attachment insecurity and self-compassion has also been highlighted in research that has looked specifically at fears of compassion (Dudley et al., 2018; Gilbert, McEwan, Matos and Rivis, 2011; Joeng et al., 2017). Dudley and colleagues (2018) found that high attachment insecurity was significantly associated with lower self-

compassion. They suggest blocks to self-compassion in those with a high attachment insecurity may be related to a fear of compassion. Indeed, Gilbert, and colleagues (2011) suggest that those from 'low affection or abusive backgrounds' are more likely to have fears of self-compassion and that resolving these fears of compassion are crucial in order to experience self-compassion. Given those with insecure attachment styles are likely to have experienced highly aversive or abusive attachment figures and experiences, it may be that they are more predisposed to be afraid of compassion, including self-compassion (Mikulincer and Shaver, 2007). Furthermore, Pauley and McPherson (2010) investigated how individuals with anxiety and depression experience self-compassion and reported that when people fear self-compassion, they resist being compassionate towards themselves. Again, they suggest that this fear of compassion may have arisen from their experiences of receiving care/compassion as a child which has been inconsistent or not successfully soothing. Therefore, the finding of this review that there is good evidence that attachment insecurity is strongly, negatively associated with self-compassion is supported by previous literature.

Neff and McGehee (2010) posited that, compared with those with a secure attachment style, individuals with an anxious attachment style tend to have more difficulties being kind to themselves and mindfully approaching distressing issues. Similarly, included in this review, Wei and colleagues (2011, Study B) suggest that those with a higher level of attachment anxiety are likely to be self-critical (i.e., negative working model of self) and feel overwhelmed by their own distress (i.e., hyperactivation). Therefore, they are likely to be unkind to themselves, and feel overwhelmed by their distress (i.e., low levels of self-compassion). Raque-Bogdan et al. (2011) further strengthen this idea that a negative working model in those with high attachment anxiety impacts on self-compassion as

research has found that high attachment anxiety is linked to both low and unstable self-esteem (Foster, Kernis, and Goldman, 2007), which has been shown to be linked to lower levels of self-compassion (Neff, 2011).

Whilst a review of the correlations reported in these papers found largely similar effect sizes for the association of both attachment anxiety and attachment avoidance, the papers using SEM (K=5) indicated that attachment anxiety accounted for a slightly smaller amount of the variance in self-compassion than attachment avoidance. Conversely, papers that used mediation models (K=6) indicated that attachment anxiety accounted for a smaller amount of the variance in self-compassion than attachment avoidance. A novel finding of this review is that across both SEM and mediation models reported here attachment avoidance accounted for a smaller amount of the variance in self-compassion data than attachment anxiety within both SEM and mediation models. This is in line with wider evidence which in general reports a more consistent picture of the relationship between attachment anxiety and self-compassion than attachment avoidance and self-compassion.

Wei and colleagues (2011) give some potential explanation for these less consistent results. They posit that for those with a higher level of attachment avoidance the working model of self and others can be positive or negative. Based on these internal working models, the less consistent findings across the samples may reflect a wide range of possibilities regarding capacity for self-compassion among those with higher levels of attachment avoidance. An inauthentic model of self proposed by Fraley, Davis, & Shaver (1998) within those with high attachment avoidance may protect them from painful interpersonal processed associated with attachment. Therefore, they may report high self-compassion due to their defensive denial of attachment-related feelings or thoughts. Conversely,

because of their strong need for compulsive self-reliance and negative working models of others, they may set high and critical standards for themselves, to ensure independence from and non-reliance on others, and avoid future rejections. The cost, however, is that they are less likely to be kind to themselves and have a hard time generating self-compassion. Raque-Bogdan and colleagues (2011 and 2016) suggest these inconsistent internal working models are factors at play in their inconclusive findings of how attachment avoidance affects variance of self-compassion reports.

Neff and McGehee (2010) also suggested attachment avoidant individuals are more likely to be self-deceptive as they wish to distance themselves from interpersonal functioning and so they may be less able to accurately describe the degree to which they are self-compassionate, or compassionate in general which could impact on consistent and accurate reporting of self-compassion.

The only experimental study in this review (Pepping et al., 2015, Study B) reported that by boosting attachment security in a group of college students, they enhanced self-compassion. In a control group of individuals who did not have their attachment security manipulated no increase was noted which suggests a degree of attachment security is implicated in showing self-compassion. Further findings to support a link between attachment security and compassion are reported by Mikulincer, Shaver, Gillath, and Nitzberg (2005) from five experiments with adult populations, replicated in two countries. They found that by boosting attachment security they could foster compassionate and altruistic behaviour, including towards the self. They posit that attachment insecurity supresses or interferes with compassionate caregiving through different processes for each attachment dimension, e.g. those with high anxiety become preoccupied with their own

distress and are not effective caregivers, and those high in attachment avoidance wish to distance themselves from others emotionally, and they have been shown to be more critical of others' distress.

This paper is the first to systematically review the quality and findings of empirical evidence of a potential association between attachment and compassion. All studies that met inclusion criteria only investigated self-compassion and not other flows of compassion, meaning we can only comment on self-compassion. Given the results and the quality ratings of the papers, it seems the most consistent, high quality findings for an association between attachment and self-compassion come from correlational findings of eight papers that are rated as ≥ 50% (K=9; Beard et al, 2017; Bistricky et al., 2017; Dudley et al., 2018; Homan, 2016; Mackintosh et al. 2017, Pepping et al., 2015, Study B; Raque-Bogdan et al., 2016; and Wei et al., 2011, Study A and B) who suggested an overall moderate effect size in the association between attachment insecurity and self-compassion. A further three studies only gained MMAT scores of 25% (K=3; Joeng et al., 2017, Pepping et al., 2015, Study A, and Raque-Bogdan et al., 2011) and therefore were considered lower quality and at a higher risk of bias than other studies so less weight was given to the findings of these studies, although all did report a small-moderate negative correlation between attachment insecurity and self-compassion.

This review also revealed the heterogeneity in populations and covariates associated with this potential association. In eleven of twelve samples, self-compassion and attachment insecurity were variables in more complex models with other co-variates. These co-variates were diverse and included: well-being, mental health, body appreciation, and experiences of parenting. These covariates are detailed in Appendix 1.3, Table 3. For example, Wei and colleagues (2011, Study B) one of the studies in this reviewed to be

judged of best quality reported that attachment insecurity was predictive of wellbeing and emotional empathy to others as mediated by self-compassion. This paper is the first to systematically review these papers and reveal potential co-variates of interest. This shows how complex the relationship between attachment insecurity and self-compassion is likely to be; and may be a reason why a throughout review of this kind does not exist in the literature already.

This review found evidence to suggest there is an association between attachment insecurity and self-compassion as discussed above. The papers reviewed shed some light on why this association may exist, although many stress the need for future research to elucidate this link.

Is the evidence of high quality?

With regard to the third research question, concerns exist regarding the quality of some of the studies included which seem to be of low quality with a high risk of bias (only three studies received an MMAT score of 75%; Beard et al, 2017; Pepping et al., 2015, Study B; Wei et al., 2011, Study B). In addition to small sample sizes in some of the included studies, all but one study (representing 2.26% of sample) used data from convenience sampling methods, calling into question the representativeness of the results. Self-selecting and online-based research designs are known to recruit a restricted range of the population of interest, which is often biased towards higher well-being and participants with greater affluence and education. The data represents a largely white, female, student sample based in industrialised countries therefore the findings cannot necessarily be generalised to males, non-student, non-white populations nor those living in lower income countries. Response bias is a concern due to low or unreported response rates. Moreover, participants

may have may responded in socially desirable ways because of the sensitive nature of the questionnaires.

The quality of the studies is reduced as the studies were mainly cross-sectional designs, which do not allow for causal conclusions. Only one study investigated any causal links in the relationship between attachment and compassion (Pepping et al., 2015, Study B) which looked at the effect of increasing attachment security on state self-compassion.

Limitations of current review

Regarding limitations of the current review, the studies that met inclusion criteria only reported on self-compassion which limits the representativeness of the findings given there are other facets of compassion (e.g. self-other and other-self compassion) that have not been explored here.

Although correlations and beta coefficients were collated, and effect sizes were calculated where possible, we did not undertake a formal meta-analysis. Only studies published in the English language, those using adults samples, and studies that used quantitative analysis were included which may have limited this review. A further limitation may be that the papers reviewed do not necessarily include the same primary aim as this review.

This review only included papers from the last ten years and this arbitrary cut off could be considered a limitation as some papers that may have met criteria were not reviewed, including Mikulincer et al., (2005) who found an association between attachment security and compassion in their study which confirmed boosting attachment security increased compassion and helping.

Conclusions and Clinical Implications

Attachment insecurity appears to be negatively correlated with self-compassion in an adult population; the studies reported small – large effect sizes. Across nine samples a negative moderate effect of both attachment anxiety and avoidance on self-compassion was found. Three studies were judged to have the highest quality in this review, suggesting less risk of bias in the results, therefore their findings of a strong effect size of this association may be more accurate.

Attachment insecurity and lower levels of compassion have both been associated with mental health problems/psychopathology (MacBeth & Gumley, 2012) and difficulties with engaging in mental health services. Attachment insecurity has also been linked to other outcomes such as self-criticism (Besser & Priel, 2005) and shame (Wei, Shaffer, Young & Zakalik, 2005) which have been established as transdiagnostic phenomena that play a role in the development and maintenance of a range of psychological disorders, and the denial of a warm and accepting orientation to the self (Gilbert & Irons, 2005). This potentially creates a barrier for clinical practice as many therapies focus on understanding the cause of, and changing, a negative perception to the self and experiences; something which individuals with attachment insecurity may find more difficult.

Furthermore, strong therapeutic alliances have been shown to make substantial and consistent contributions to therapy outcomes independent of the type of treatment (Ackerman et al., 2001). Insecure attachment styles in patients has been linked to a weaker alliance, through some of the mechanisms mentioned above (Diener & Monroe, 2011).

Increasing self-compassion is known to contribute to well-being and positive mental health outcomes (Neff, 2011a), as is increasing attachment security (Mikulincer et al., 2005). Gilbert and Procter (2006) found self-compassion can be enhanced with practice and Neff

and McGehee (2010) posit that it may be easier and more pragmatic for some individuals to learn how to be self-compassionate than to work on increasing attachment security. Further research is needed to explore the clinical relevance of these tentative suggestions.

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CHAPTER 2:

MAJOR RESEARCH PROJECT

EXPLORING THE ASSOCIATION BETWEEN ATTACHMENT AND NARRATIVE COMPASSION IN ADULT MENTAL HEALTH

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Plain English Summary

Background: Humans share a universal need to form close bonds with others in order to feel safe and secure (Bolwby, 1969/1982). According to Attachment Theory, infants' experiences of their early relationships act as 'blueprints' for future relationships, and influence how they think of themselves and others - this 'blueprint' is known as their attachment style. An insecure attachment is where there is high anxiety or high avoidance associated with how an individual interacts and forms bonds with others. A fearful attachment exists when an individual has both high anxiety and high avoidance in their approach; this has been linked to how individuals experience compassion.

Aims: This study aimed to identify individuals high in attachment anxiety *and* avoidance, and the links this could have with compassion, within an adult population who present at community services.

Methods:

Participants: Adults in Ayrshire and Arran aged between 18-64 who attended an outpatient clinic for assessment were invited to participate. They were excluded if they had a head injury or they did not have difficulties with emotions or relationships.

Design and procedures: Individuals who came for an assessment at the Community Mental Health Team were invited to take part. This was a pilot study which had a correlation design. This means we were testing whether this study could run well and we wanted to find out if attachment and compassion were associated. At the assessment these individuals could choose to complete an attachment questionnaire. Those with a high score were invited to attend an interview about compassion.

Measures:

Psychosis Attachment Measure (PAM): This is a questionnaire about thoughts, feelings and behaviours in close relationships.

Narrative Interview for Compassion: This is an interview, measuring a person's experience of compassion towards the self and others.

Results: Forty-five individuals were approached, 24 completed the attachment questionnaire and fifteen were eligible for the compassion interview. Signals in the results suggested that people with both high attachment anxiety and avoidance scores were likely to show lower levels of compassion.

Conclusions: We found signals that suggested having high scores in both attachment anxiety and avoidance is linked to being less able to show and experience compassion. This builds on evidence that the skills necessary for compassion may be linked to this relationship 'blueprint', i.e. someone's attachment style. This might have effects on how therapy progresses for people with a this type of attachment. As this was just a pilot study, the numbers of participants was low, so we need to explore these results further with a larger sample.

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Word count: 430

Practitioner Points

Individuals who showed signals suggesting they were high in both attachment anxiety and avoidance seem to have difficulties in understanding, showing and receiving compassion. This may influence their responses to the therapist and the therapeutic relationship.

Information from the PAM could help inform a successful treatment approach given therapies which use compassionate principles may be potentially threatening for individuals with both high attachment anxiety and avoidance.

Abstract

Objectives: A minority of individuals display high anxiety and avoidance in their attachment style. They are hypothesised to have a fearful attachment. Growing evidence posits that attachment style is associated with compassion. This pilot study aimed to determine whether those with high scores in both attachment avoidance and anxiety could be identified, how these individuals might respond to a compassion interview and whether any associations could be observed between this attachment insecurity and compassion.

Design: Cross-sectional pilot study.

Method: Individuals with interpersonal or emotional-regulation difficulties, complex trauma, or depression completed the Psychosis Attachment Measure (PAM) and the Narrative Compassion Interview (NCI). Scores were correlated and examples from NCIs were reported as prototypes for future coding.

Results: 45 individuals were approached, 24 completed the PAM of which 15 showed high attachment anxiety and avoidance. 13 individuals (M_{age} = 39, SD = 11.73, 10 female) were interviewed. Our primary analyses identified signals indicting that high scores in both attachment insecurity dimensions were negatively correlated with total compassion scores (r = -0.46, 95% CI [-0.82, 0.19]), and some subscales of NCI.

Conclusions: This pilot study identified signals from the data that indicated high insecurity in both attachment dimensions was negatively correlated with compassion. These important signals give some indication of how those with both high attachment anxiety and avoidance may reflect on compassion; therefore further studies are merited. Clinical implications include; implications for different flows of compassion and engagement with therapist, and ability to tolerate therapies that rely on compassionate approaches. A larger sample is required to replicate these results and further explore their clinical significance.

Introduction

Humans share a universal and evolutionary need to form close affectional bonds with others in order to feel safe and secure (Bowlby, 1969/1982), through seeking comfort, and soothing and protective closeness (Ainsworth, 1979).

In attachment theory, infants' experiences of their relationships with their primary caregivers are internalised and influence future interactions; these are known as internal working models (IWM; Bretherton, 1999), which are subject to revision over time. An individual's IWM influences their perception of themselves and others as well as regulating their affect, and psychological functioning, in other interpersonal experiences. These have been operationalized in terms of attachment dimensions, which are specified in social psychology literature as attachment anxiety and avoidance (Bartholomew and Horowitz, 1991). They describe attachment anxiety as fear of abandonment or rejection and excessive need for approval. Attachment avoidance is described as fear of interpersonal intimacy and dependence, and the avoidance of close relationships, with a need for self-reliance and reluctance to disclose anything about the self. Those who report high levels of attachment anxiety are described as insecure-anxious and those who report high levels of avoidance are said to be insecure-avoidant. A third pattern is described when individuals report low levels on both dimensions; they represent a secure attachment style.

These three styles are said to be organised patterns according to Bartholomew and Horowitz (1991) as they represent coherent approaches to attachment-related interactions. However, a fourth pattern is described as a fearful style of attachment where individuals report high levels of both anxiety and avoidance, in infants this is seen as disorganisation of the attachment system (Main and Hesse, 1990). This attachment in infants is posited to arise when the attachment figure simultaneously acts as the source of security and the

source of fear (i.e. a caregiver who is a perceived protector/solution against harm or distress but is also a figure who activates a fight or flight response) and the individual develops incoherence in their affect regulation and in how they get their attachment needs met (Hesse and Main, 2006). Continued experiencing of a caregiver who through their confusing, frightening, frightened, or hostile approaches activates a flight or fight response, whilst simultaneously experiencing an urge to seek comfort from them, the infant is left with conflicted feelings and perceptions culminating in a 'fright without solution' situation (Cassidy & Mohr, 2001). Brennan, Shaver and Tobey (1991) posited that adults with a fearful attachment style may be the adult versions of the disorganised infant. Those with a fearful attachment are thought to possess both negative models of self and of others; hence they both desire and fear intimacy. This disorganised approach is thought to occur in around 15% of individuals in infancy (Ainsworth, 1979), however levels of fearful attachment in adult populations is less well known.

Research has shown that individuals with psychological disorders are more likely to have insecure or disorganised attachments compared to a typical population; but there exist few definitive studies of adults that link these specific styles to specific diagnostic categories (Dozier, Stovall & Albus, 1999). However, attachment disorganisation has been shown to be a powerful predictor of a range of later social and cognitive difficulties and psychopathology in children (Green & Goldwyn, 2002). Disorganised attachment in infancy has also been associated with vulnerability for a variety of mental health issues in adulthood; such as borderline personality disorder (BPD; Holmes, 2004), complex trauma (environments associated with disorganised attachment increase risk of further exposure to trauma or loss) and depression (Bureau, Easterbrooks, & Lyons-Ruth, 2009). Muller and colleagues (2001) reported adults with a fearful attachment show greatest levels of

psychopathology. Individuals with a fearful attachment style have been linked to greater risk of personality disorders (Brennan & Shaver, 1998), depression (Murphy & Bates, 1997) and psychosis (Bucci, Emsley and Berry, 2017) as well as other various forms of psychopathology (Dozier et al., 1999).

The Narrative Compassion Interview was developed by Gumley & MacBeth (2014) and is designed to measure different flows of compassion. Compassion is twofold: a sensitive, caring and warm awareness of pain and suffering experienced by oneself and others; and motivation to appropriately comprehend and alleviate suffering (Gilbert, 2005). The foundations of these abilities are competencies that seem rooted in attachment theory. Gumley & MacBeth (2014) proposed that security of attachment facilitates development of these abilities that enable capacity to detect and engage with distress, in others and ourselves, in a bid to alleviate pain and distress, and restore wellbeing, e.g. one's ability to be compassionate is developmentally organised.

Measuring attachment insecurity, and attachment disorganisation especially, is complex. Traditionally, attachment disorganisation has been measured using narrative-based measures. The Adult Attachment Interview (AAI; Main, George & Kaplan, 1985) is commonly used and has been shown to be comprehensive and reliable in indicating attachment disorganisation, however it is time-consuming to administer. Other measures have been shown as less reliable, or less than comprehensive (Ravitz, Maunder & Hunter, et al., 2010). Therefore, a reliable measure of attachment disorganisation is not forthcoming. Given the proposed suggestion that disorganised attachment is an analogue of fearful attachment (i.e. that both confer high levels of attachment anxiety and avoidance) it may be more prudent to identify ways to measure this fearful attachment through measuring both dimensions of attachment with a self-report measure. Bucci and colleagues

(2017) used latent profile analysis on attachment data from 588 participants to classify people into attachment classes (Bucci, et al., 2017). They identified four latent classes of attachment: secure, insecure-anxious, insecure-avoidant and what they termed disorganised; which they suggest is analogous to a fearful attachment with high scores on both anxiety and avoidant attachment dimensions. They suggest the Psychosis Attachment Measure (PAM) as a quick and reliable self-report measure compared to other measures of attachment.

In this study we use findings Bucci and colleague's (2017) profile analysis of attachment styles to elucidate if it is possible to identify individuals from a psychology outpatient population who score high in attachment anxiety and avoidance. In Bucci and colleagues' (2017) paper this was said to be analogous of a fearful/disorganised attachment style in their psychosis population. Since the PAM has not been validated for use with non-psychosis populations (although we found no arguments for why this could not work), we will refrain from using Bucci and colleagues' (2017) category of a distinct disorganised/fearful group, and instead we will use scores from the PAM to identify individuals who score highly in both attachment anxiety and avoidance.

Although this measure was developed for use with individuals who experience psychosis, we justify its use as it is one of the few self-report measures of attachment that does not rely on having had romantic or close relationships. Our population of interest are those in a CMHT population that have been identified by clinician's as having interpersonal, and mental health difficulties that have been linked to attachment insecurity. Attachment insecurity is linked with greater social isolation (Kessler, Price and Wortman, 1985) and therefore the individuals of interest in this study may not have romantic or close relationships to draw on, and therefore use of other measures that rely on these

relationships may result in inaccurate measurement of attachment. Furthermore, although the measure has been validated with psychosis populations, it does not ask questions that pertain exclusively to those who have experienced psychosis. Berry and colleagues (2007a) used this measure with a non-clinical sample (i.e. not a sample purely derived of individuals with psychosis) and found the PAM provided a valid and reliable measure of the two dimensions of attachment, anxiety and avoidance, which underlie current models of attachment. They posited the PAM would therefore be a useful instrument in assessing relationships between adult attachment style and interpersonal experiences in both clinical and analogue studies.

Methods

Aims and hypotheses

As a pilot study, we aimed to examine patterns of attachment, including seeking to identify individuals with high scores in both attachment dimensions, i.e. those who seem to be high in both attachment anxiety and avoidance.

Thereafter, we aimed to explore how these individuals would reflect during an interview-based measure of compassion; the NCI (Gumley & Macbeth, 2011). We hoped to provide evidence for the utility of the NCI as a measure of compassion in this population. In addition, this study aimed to explore more explicitly the associations between attachment as measured by the PAM (Bucci et al., 2017) and compassion as measured by the NCI. It was hypothesised that those who showed signals indicating greater attachment anxiety and avoidance would show lower levels of compassion for others and for self, as well as lower levels of understanding compassion.

This pilot study also aimed to provide the basis for a more accurate estimation of sample size, and analysis of suitability of the procedures, to base future research initiatives on.

Inclusion and Exclusion Criteria

Individuals were invited to participate in Stage 1 (completion of the PAM measure) if they were assessed as exhibiting any of the following difficulties which may be linked to attachment difficulties; interpersonal, emotional regulation, complex trauma, depression, or personality disorder, and they were between 18 and 64 years old. Individuals were excluded if head injury or organic disorder was adjudged the primary cause of the individual's symptomatology if they presented with a neurodevelopmental or specific neuropsychological difficulty that could affect interpersonal functioning or their ability to complete the measures (e.g. ASD or memory difficulties).

Measures

Psychosis Attachment Measure (PAM)

The 16-item PAM (Berry et al., 2008; Appendix 2.3) is a self-report measure based on the existing measures of attachment (Bartholomew & Horowitz, 1991), which assesses two dimensions of attachment; anxiety and avoidance. Participants rate statements regarding the extent to which believe they currently relate to key people in their life ('not at all' to 'very much') on a four-point Likert scale. Total scores are calculated for each dimension by averaging item scores, with higher scores reflecting greater anxiety and avoidance. Acceptable levels of internal consistency have been demonstrated across studies (Gumley et al., 2014).

Attachment style was assessed by PAM scores using a scoring index developed by Bucci and colleagues (2017). Individuals at risk of a fearful or disorganised attachment are thought to score highly on both anxious and avoidant attachment dimensions of the PAM; externally they are individuals who show a less coherent approach in regulating their affect or having their attachment needs met. Bucci and colleagues (2017) reported mean scores for each item of the PAM for the 'disorganised class'. Using these scores we calculated an overall mean item score (taking into account the standard deviation in that data) that would give us a cut-off average score that would indicate individuals showing high scores in both attachment anxiety and avoidance, which Bucci et al (2017) categorised as disorganised in a psychosis population. The cut-off score was calculated as ≥2.1 across both dimensions. As this approach has not been validated with a non-psychosis population, these individuals will be referred to as high on both anxious and avoidant attachment scores. Those who met the cut off were invited for the NCI.

Narrative Compassion Interview (NCI)

The NCI is a 30-45 minute semi-structured interview, measuring an individual's experience of compassion towards the self and others (Gumley & Macbeth, 2011; Appendix 2.4). The interview explores different expressions of compassion; namely understanding of compassion, self-oriented (compassion towards oneself), and other-oriented compassion (compassion from others, and to others). The interview is designed to access compassion related thoughts, feelings and behaviours by providing an opportunity for the interviewee to discuss autobiographical memories and reflections of potentially stressful interpersonal experiences.

Participants, Design & Study Procedures

A correlational design was used to evaluate any correlation between attachment style and scores of different expressions of compassion, i.e. PAM and NCI scores. The recruitment process consisted of two stages. At both stages, participants were informed that their participation was voluntary, and they were informed of the aims and procedures involved in the study to ensure informed consent.

Participants were recruited via monthly South Ayrshire Psychology service assessment clinics and/or individual assessment slots. When participants attended for assessment, and if deemed eligible by their assessing clinician, they were provided with a 'research pack' containing a Patient Information Sheet, a consent form, and a PAM; stage one (see MRP appendices).

At stage two, the interview stage, participants met with the researcher for approximately 1 hour. The interviews were recorded using a digital recording device. The data were transcribed after the interview and all transcripts were anonymised. Participants were also informed that selected quotations could be used in the presentation of results.

Ethics

Ethical approval was granted by the NHS West of Scotland Research Ethics Committee (Appendix 2.2; Ref: 10/S0703/67). Managerial approval was obtained from NHS A&A Research and Development (Appendix 2.2).

Sample Size

This is the first study to investigate the relationship between disorganised attachment as measured by the PAM, and compassion as measured by the NCI. From studies of attachment theory and the development of compassion from an attachment framework, we

expected a correlation between attachment and compassion, therefore an experimental hypothesis of r= 0.5 and a null hypothesis of r=0.0 were adopted. Using a conventional significance level of alpha =0.05, and a power of 0.8, we estimated a sample size of n=23 would be required to adequately evaluate the primary hypothesis. Therefore, the primary aims of the pilot study were to determine whether those at risk of fearful or disorganised attachment could be identified, how these individuals might respond to an interview about compassion and whether we could observe associations between attachment as measured by PAM and compassion as rated by the NCI. Furthermore, as a pilot study, we hoped to provide the basis for a more accurate estimation of sample size, and analysis of suitability of the procedures, to base future research initiatives on.

Data Analysis Procedures

A Narrative Compassion Coding System developed by Gumley & MacBeth (2013) was used to code the Narrative Interview. Four subscales for coding exist and each question was given a score of -1 to 9 depending on the level of understanding or compassion exhibited through report of experiences of examples. It is scored via a coding frame applied to the transcribed interview. The coding frame permits coding of manuscripts via bottom-up analysis of features of the narrative structure; and top-down analysis of the interview themes (see Appendix 2.5).

Our primary analyses sought to explore the association between fearful attachment and compassion; these were largely descriptive and correlational. Secondary analyses explored the correlation between PAM Anxiety and Avoidance subscales and NCI subscales. Scores on PAM were correlated with scores of compassion derived from the Narrative Compassion Interview using Spearman correlations, due to the nonparametric nature of the data. Data were analysed using SPSS version 18. Given the pilot nature of this project, and

in order to avoid missing potentially important signals, effect sizes (correlation coefficients) and their 95% Confidence Intervals (using 1,000 bootstrap resamples) were calculated. We regarded any correlations of less than 0.3 as negligible given our small sample size and the uncertainty in our data. Any correlations of 0.3 or greater were considered potentially important signals. Using these correlation coefficients, we considered what sample size would be required to detect this association in future studies.

Results

Participant Sample

Clinicians distributed 45 research packs, and 24 participants returned completed packs, including PAM measures, indicating a 53.3% consent rate. Of these 24, 15 were eligible for the NCI (62.5% eligibility rate in this sample). Two did not attend for their interview; thus 13 were interviewed (86.6% attendance rate). Overall 28.9% of those approached were interviewed. Therefore, the final sample was 13 individuals with age range of 19-53 (M_{age} = 39, *SD* = 11.73, Mdn_{age} = 43, *IQR* = 23) of which ten were female.

Descriptive Statistics

Higher PAM scores represent greater anxiety and avoidance in attachment approach; only those with a mean item score ≥2.1 were invited for interview. The overall PAM score in this sample was (*M* =2.3, *SD* = 0.17, *Mdn* = 2.31, *IQR* = 0.313). PAM scores were also calculated for each subscale; anxiety (*M* = 2.3, *SD* = 0.44, *Mdn* = 2.38, *IQR* = 0.88) and avoidance (*M* = 2.31, *SD* = 0.39, *Mdn* = 2.375, *IQR* = 0.44).

NCI scores were calculated for each subscale of compassion examined; Compassionate Understanding (*M* = 3, *SD* = 1.41, *Mdn* = 3, *IQR* = 2), Self-Other Compassion (*M* = 3.92, *SD* = 1.55, *Mdn* = 3, *IQR* = 2), Other-Self Compassion (*M* = 2.54, *SD* = 1.66, *Mdn* = 3, *IQR* = 3) and Self-Compassion (*M* = 1.31, *SD*= 0.75, *Mdn* = 1, *IQR* = 0), as well as overall scores (*M* = 10.54, *SD* = 4.1, *Mdn* = 11, IQR = 6). Table 1 provides a summary of these scores. Wilcoxon Signed Rank tests were conducted to compare the different NCI subscales. Other-self scores were significantly lower than self-other scores (*Z*= -2.31, $p<0.05$). Self-self (self-compassion) scores were significantly lower than self-other (*Z*= -3.02, $p<0.005$) and other-self scores (*Z*= -2.27, $p<0.05$).

Correlation Analysis

As the NCI is coded with an ordinal scale and therefore not normally distributed, Spearman rank correlation tests were used. The results of Spearman's correlations did not reveal any significant correlations at $p<0.05$ level which was expected given the low *N*; however, given the pilot nature of this project, and in order to avoid missing potentially important signals, effect sizes and 95% Confidence Intervals for the correlation coefficient were calculated using bootstrapping re-sampling (1,000 resamples) in SPSS. We regarded any correlations of less than 0.3 as negligible given our small sample size and the uncertainty in our data. These results are summarised in Table 2.

Primary Analyses: Overall PAM scores (fearful attachment) were negatively correlated with overall NCI scores (*r* = -0.46, 95% CI [-0.82, 0.19]), and all subscales of the NCI; Compassionate Understanding (*r* = -0.40, 95% CI [-0.77, 0.10]), Self-Other Compassion (*r* = -0.30, 95% CI [-0.73, 0.3]), Other-Self Compassion (*r* = -0.38, 95% CI [-0.82, 0.22]), indicating a potential negative relationship between overall PAM scores and these NCI

scores. There was a negligible correlation between overall PAM scores and Self-Compassion (r = -0.12, 95% CI [-0.61, 0.35], which may be influenced by the lack of variance in this subscale.

Secondary Analyses: PAM Anxiety scores were negatively correlated with NCI scores. There were negligible correlations between PAM Anxiety scores and overall NCI scores (r= -0.14, 95% CI [-0.75, 0.50]), Compassionate Understanding (r = 0.03, 95% CI [-0.51, 0.54]), Self-Other Compassion (r = -0.08, 95% CI [-0.75, 0.55]) Other-Self Compassion (r = -0.25, 95% CI [-0.72, 0.27]), and Self-Compassion (r = -0.26, 95% CI [-0.67, 0.21]) scores.

PAM Avoidance scores were negatively correlated with overall NCI scores (r = -0.30, 95% CI [-0.78, 0.36]), and Compassionate Understanding (r = -0.46, 95% CI [-0.81, 0.05]) scores. There were negligible correlations between PAM Avoidance scores and Self-Other Compassion (r = -0.24, 95% CI [-0.71, 0.38]), Other-Self (r = -0.07, 95% CI [-0.66, 0.55]) and Self- Compassion (r = 0.09, 95% CI [-0.37, 0.51]) scores. Table 2 summarises these correlations and associated 95% CI.

Table 1: Descriptive Statistics

	Range	Mean	SD	Median	IQR
Age	19 - 53	39	11.73	43	23
PAM Overall	2.1 - 2.6	2.3	0.17	2.31	0.31
PAM Anxiety	1.8 - 3.0	2.3	0.44	2.38	0.88
PAM Avoidance	1.4 - 2.8	2.31	0.39	2.38	0.44
NCI Overall	4 - 18	10.54	4.1	11	6
NCI 'Compassionate Understanding'	1 - 5	3	1.41	3	2
NCI 'Self-Other Compassion'	1 - 7	3.92	1.55	3	2
NCI 'Other- Self Compassion'	1 - 5	2.54	1.66	3	3
NCI 'Self-Compassion'	1 - 3	1.31	0.75	1	0

Table 2: Correlation Analysis

		PAM Overall	PAM Anxiety	PAM Avoidance
Correlation Coefficient (*r*) and associated 95% Confidence Intervals**	**NCI Overall**	-0.45*	-0.14	-0.30*
		[-0.82, 0.19]	[-0.75, 0.50]	[-0.78, 0.36]
	NCI Compassionate Understanding	-0.40*	0.03	-0.46*
		[-0.77, 0.10]	[-0.51, 0.54]	[-0.81, 0.05]
	NCI Self-Other Compassion	-0.30*	-0.08	-0.24
		[-0.73, 0.30]	[-0.75, 0.60]	[-0.71, 0.38]
	NCI Other- Self Compassion	-0.38*	-0.25	-0.07
		[-0.82, 0.22]	[-0.72, 0.27]	[-0.66, 0.55]
	NCI Self-Compassion	-0.12	-0.26	0.09
		[-0.61, 0.35]	[-0.67, 0.21]	[-0.37, 0.51]

* denotes correlation coefficient (*r)* regarded as a potentially important signal (i.e. $r \geq 0.3$)

**95% Confidence Intervals calculated using 1,000 resamples

Discussion

Patterns of attachment & utility of the PAM

This pilot study aimed determine whether it was feasible to recruit individuals to this study who met the proposed scoring thresholds and further to examine patterns of attachment using the PAM, including seeking to identify individuals with both high attachment anxiety and avoidance. The PAM appeared to be a useful tool in identifying these individuals. Using the threshold from latent profile analysis results from Bucci and colleagues (2017), we identified 15 individuals who had a mean item score of ≥2.1, and therefore met our threshold criteria. This represents 62.5% of completed the PAM, which is higher than findings of Bucci et al. (2017) who reported 14% of their sample as having high scores on both attachment dimensions, which they classified as disorganised. Compared to Bucci et al.'s (2017) sample of individuals with a schizophrenia-related disorder, individuals in this study may have been at higher risk of having high scores on both attachment dimensions given their presenting difficulties such as borderline personality disorder and interpersonal difficulties (Holmes, 2004); complex trauma and depression (Bureau et al., 2009) which have been linked to higher rates of disorganised attachment.

Association between PAM scores and NCI scores

It was hypothesised that those who were high on both anxious and avoidant attachment scores would show lower levels of compassion. In this study, these individuals were judged as those with mean item scores ≥2.1 on the PAM. Therefore, the correlations of

main interest are those between overall PAM scores (theoretically reflecting a fearful attachment) and the NCI and its subscales.

Signals from our primary analyses indicated overall PAM scores were negatively correlated with all NCI subscales and the NCI overall score. This suggests individuals with scores high on both attachment dimensions may find it more difficult to express, receive, or talk about compassion. This is reflected in the correlation between overall PAM scores and NCI overall score; r = -0.46, 95% CI [-0.82, 0.19]. This suggests that having high scores on both attachment dimensions is negatively linked to compassion.

Previous research has linked self-compassion with both dimensions of attachment insecurity (Bistricky et al., 2017; Homan, 2016; Mackintosh et al., 2017; Pepping et al 2015; Raque-Bogdan et al., 2011, 2016; and Wei et al., 2011), with a consensus that greater attachment insecurity is linked to lower levels of self-compassion.

For example, Wei and colleagues (2011) found a moderate effect size between both attachment anxiety and avoidance and self-compassion. They discuss possible reasons for this by suggesting that those with a higher level of attachment anxiety are likely to be self-critical and feel overwhelmed by their own distress. Therefore, they are likely to be unkind to themselves, and feel overwhelmed by their painful thoughts and feelings (i.e., low levels of self-compassion). Wei and colleagues (2011) also suggest that attachment avoidant individuals may struggle with self-compassion as they are less likely to be kind to themselves due to their desire for self-reliance which can lead to self-criticism and emotional distance from things that are interpersonal, including their own feelings. In our study we did not find signals indicating this trend, although as we will discuss, this may be due to limitations associated with the NCI and our small sample size.

Whilst the link between attachment insecurity and self-compassion has been documented in the recent papers described above, less empirical evidence exists that investigates the link between attachment insecurity and other flows of compassion, e.g. self-other and other-self. Attachment insecurity may well be linked to other forms of compassion as attachment theorists suggest that signals of kindness and compassion from another person will reactivate the attachment system (Mikulincer and Shaver, 2007), and certainly other flows of compassion involve these processes as responding to another's distress, or having your distress responded to may activate this system as these interactions are linked to interpersonal functioning, understanding and use of emotion regulation, and responding to an individual's needs in a bid to alleviate distress.

As discussed, attachment anxiety involves anxiety in developing close relationships, expectations of separation and rejection, a negative self-perception, excessive need for approval, dependence on others and exaggerated affect or helplessness to maintain contact or proximity with another (Purnell, 2010). Attachment anxiety may limit an individual's ability to be compassionate as these individuals display emotional hyperactivating strategies which interfere with compassion when they are involved in situations that activate their attachment system. Gillath, Shaver and Mikulincer (2005) suggest this may be because the anxious person is likely to be preoccupied with his or her own vulnerability and emotional arousal resulting in lack of attention to and accurate appraisal of other people's needs which are necessary for compassion. This fits with evidence that anxious individuals tend to focus more on their own distress and needs (Collins and Read, 1994). Mikulincer, Shaver, Gillath and Nitzberg (2005) suggests this preoccupation with the self may draw mental resources away from taking the perspective of a distressed person and displaying compassionate behaviour. This focus on their own discomfort fits with evidence

from Westmaas and Silver (2001) who examined associations between attachment insecurity and reactions to a confederate who they believed was diagnosed with cancer. Participants who scored high on attachment anxiety reported greater discomfort when interacting with the confederate and behaved less supportively towards them. They also reported more self-critical thoughts after the experiment. Westmaas and Silver (2001) also suggested these self-related worries and emotional over-involvement interfered with compassion and caregiving in general.

A similar effect has been found in other experimental studies. For example, Gillath and colleagues (2005) examined the actual decision to help or not help a person in distress. In two experiments participants first completed the ECR (Experiences in Close Relationships Scale; Brennan et al., 1998) to measure their attachment security, then they were split into two groups, with one group primed in order to enhance their attachment security. In their study participants watched as a confederate became increasingly distressed at difficult tasks. The actual participant was then given an opportunity to take the distressed person's place, i.e. sacrificing their welfare for another's. At the point of decision making, the participants completed brief measures of compassion and distress. The author's reported that attachment anxiety was related to heightened personal distress and lower compassion and willingness to help.

Further processes may affect the association between attachment anxiety and compassion. Shaver and Mikulincer (2009) reported those with high attachment anxiety experience difficulties in self-soothing and regulating emotion both of which they posit are vital for recognising and alleviating different flows of compassion, e.g. if self-regulation is not possible then effective compassionate responses are less likely, and receiving compassion may be more difficult as it may be distressing. Furthermore, research shows those high in

attachment anxiety are typically more critical of themselves and others (Mikulincer et al., 2005), which fits with evidence from the Westmaas and Silver (2001) study. This is important as criticism, even of the self, is at odds with a non-judgemental and understanding stance which is essential for different flows of compassion (Cantazero & Wei, 2010).

Attachment avoidance is associated with avoidance of close relationships, emotional deactivation, and greater independence at the expense of relationships (Bartholomew and Horowitz, 1991). Gillath and colleagues (2005) posit that those with high attachment avoidance who are in situations that activate their attachment system (e.g. when distress is expressed and compassion warranted) demonstrate deactivating strategies aimed at distancing the person from all sources of suffering and all kinds of closeness to others. The deactivating strategies block activation of the caregiving system because empathic responsiveness to others' needs entails emotional involvement, acknowledgement of others' distress, and acceptance of the closeness that an empathic reaction implies; things which conflict with an attachment avoidant individual's response. This seems in line with empirical evidence from Collins and Read (1994) who report those with attachment avoidance tend to be more cynical and disapproving of other people's signals of vulnerability, weakness and need. Furthermore, in the previously described experiment by Westmaas and Silver (2001) individuals who scored high on attachment avoidance behaved less supportively, both verbally and nonverbally, towards confederate participants who were showing distress. They reported a moderate effect size. The researchers posited this was because these individuals sought emotional distance from another's distress and they less readily displayed compassion. In the experimental research described earlier by

Mikulincer and colleagues (2005), attachment avoidance was related to lower reported compassion and willingness to help the distressed confederate.

Mikulincer and colleagues (2007) reported avoidant individuals may downplay any signs of personal vulnerability in themselves in a bid to remain independent of others and to avoid experiencing difficult emotions, and to avoid any self-disclosure. Moreover, they may avoid any emotional states and not extend compassion towards anyone as this would require engaging with distress and another person. Avoidance like this conflicts with a compassionate response which involves an awareness of distress and a commitment to alleviate it.

Even less is known about potential links between those who show both high attachment anxiety and avoidance (sometimes termed fearful attachment) and different flows of compassion. This study is the first to explore this link using a self-report measure (the PAM) that does not rely on having had close relationships. This is important because attachment insecurity is linked with greater social isolation (Kessler, Price and Wortman, 1985) and therefore individuals with these attachment orientations may not have close relationships to draw on when completing self-report measures, thus making them potentially less accurate. The use of the NCI is also important, and a novel contribution of this study, as using a narrative approach to exploring auobiographical memories of caregiving/receiving is likely to activate the attachment system (Gilbert, 2005) of the participant in a way that self-report measures may not achieve (as they do not rely on detailed autobiographical memories). This activation of the attachment system should theoretically give a recounting of different flows of compassion that is impacted by the individual's attachment security in a way that could be less likely with self-report measures, as they would not necessarily activate the attachment system. However, without

a control group, or data from individuals in simialr studies who used self-report measures, this is conjecture.

Individuals with both high attachment anxiety and avoidance (which has been linked to fearful attachment) may find any form of compassion more difficult as individuals may experience both the responses outlined above (broadly hyperactivating and deactivating strategies), but this difficulty may be compounded as they may experience these responses in an incoherent manner. Those with a high insecurity in both attachment dimensions are thought to possess both negative models of self and of others; hence they both desire and fear intimacy. Therefore, they may be in conflict in situations requiring compassion as they may experience a desire to help whilst also experiencing high levels of fear at the thought of engaging with an individual or situation that activates their attachment system, e.g. a situation involving compassion. This is suggested by signals in these data which indicate a moderate correlation between overall PAM scores and overall NCI scores (r = -0.46, 95% CI [-0.82, 0.19]), therefore we suggest it is indicated that individuals with both high anxious and avoidant attachment scores may have difficulties in respect to all aspects of compassion.

There exist some studies that look specifically at individuals high in both attachment anxiety and avoidance (i.e. those most similar to this population) which is akin to fearful attachment, but this evidence largely relates to self-compassion. Neff and McGehee (2010) found that in adolescents and young adults, a fearful attachment style (high in both attachment anxiety and avoidance) was significantly correlated with lower levels of self-compassion. They reported a strong effect size of this association. They posit that these individuals may not have the emotional foundation needed to provide themselves with compassion, and that they may have had fewer experiences of compassion in childhood.

They also posit that how individuals treat themselves in times of suffering or failure may be modelled on family or parental experiences and if parents are inconsistent, angry, cold or critical towards their children (which is associated with fearful attachment developing in the child) then this may be a reflection of how the parents treat themselves, e.g. the parents have low levels of self-compassion.

In a study of participants that experience hearing voices, Dudley and colleagues (2018) found that fearful attachment (i.e. high insecurity in both attachment dimensions) was the only insecure attachment style significantly associated with lower self-compassion. They also reported a strong effect size. They suggest blocks to self-compassion in those with a fearful attachment may be related to a fear of compassion. Indeed, Gilbert, McEwan, Matos, and Rivis (2011) suggest that those from 'low affection or abusive backgrounds' are more likely to have fears of self-compassion and that resolving these fears of compassion are crucial in order to experience all flows of compassion. Given those with fearful attachment styles are likely to have experienced highly aversive or abusive attachment figures and experiences, it may be that they are more predisposed to be more fearful of caregivers and compassion.

Another important factor to consider in the relationship between attachment security and compassion is reflective functioning (RF). RF refers to the capacity of an individual to reflect on mental states of self and others in the context of early attachment relationships (Fonagy, 2018). Good RF is the capacity to have knowledge of mental states of others ('mentalising') and reflect on these to understand others' behaviour. The development of RF depends on opportunities available to the child in early life to observe and explore the mind of its primary caregiver. If a caregiver understands a child's mental state and is able to react appropriately to manage the child's distress this provides modelling for the child to

begin to mentalise their own and other's mental states. For the securely attached child, there is no distress associated with exploring these abilities and thinking about the mental states of its caregiver. In contrast, infants with a disorganised or fearful attachment style (i.e. high in both attachment anxiety and avoidance) can appear hypersensitive to the caregiver's mental states yet fail to generalise this to their own mental state due to inconsistent or inappropriate responses from the caregiver (Fonagy, 2018). This ability, to be able to understand mental states, is crucial for different flows of compassion, as compassion is by definition the ability to recognise distress in the self and others, and the commitment to alleviate this suffering. If an individual does not possess this implicit process, and their mentalising capacities are impacted, then it will undoubtedly be more difficult for them to be compassionate to the self or others, or experience compassion. This is supported by Gilbert (2013) who states the ability to mentalise is crucial to being able to empathise with an individual, to understand what is causing distress, and also who could be potential reliefs to this distress. Therefore, it seems RF is affected by attachment and is implicated in all flows of compassion.

This is the first study to investigate the link between high scores on both attachment dimensions and compassion using an attachment measure that does not rely on close relationships along with a narrative compassion measure that, as discussed, may activate the attachment system of interviewees. Primary analyses of the data from these two measures revealed signals indicating a strong negative correlation between the two, suggesting a link between attachment that is high in both attachment anxiety and avoidance, and compassion.

The above discussion highlights how our findings fit with evidence for this association and its possible mechanisms. The variety of evidence and different effect sizes, populations,

covariates and processes implicated highlights the complexity of this field and the difficulty in elucidating these links, even before causality is fully considered. This pilot study hoped to further clarify this association. It provides tentative suggestions and seeks to show how these findings fit with the existing literature base.

Limitations to current study & directions for future research

There are a number of limitations to the current study; firstly, this is a small sample size and any findings should be interpreted with caution. Future research should seek to explore these findings with a larger sample size. Secondly, as the current study only uses correlational analysis, we cannot determine the directions of causality between PAM and NCI scores. Thirdly, we used convenience sampling and recruited largely female participants, therefore the findings of the current study cannot be generalized further or to men. It would be helpful for future research to investigate potential confounders, such as socioeconomic statues, ethnicity, mental health and gender further. Fourth, as the PAM has not been validated for use with a non-psychosis population, we were unable to use Bucci et al.'s (2017) latent profile analysis and therefore were unable to refer to our group of interest as disorganised/fearful attachment which may create confusion. Future studies could seek to validate the PAM for this use before this pilot study is extended into a full study.

Importantly, this pilot study sought to provide the basis for a more accurate estimation of sample size to base future research initiatives on. Using a conventional significance level of alpha =0.05, and a power of 0.8, research seeking to investigate the potential associations between high scores on both attachment dimensions and compassion would require 55 individuals to be interviewed given the overall mean effect size detected in this study (M_r = -0.33). Given our participant completion rate from approach to interview is

(28.9%); 191 individuals would need to be approached to recruit this required sample. When people did complete the PAM we found 62.5% showed both high attachment anxiety and avoidance scores. It would be worthwhile to build further evidence regarding the needs of this group and whether routine screening would be helpful in terms of supporting assessment, formulation and treatment.

There are merits in using a narrative approach to measuring compassion as we can be confident in the individual's understanding of compassion, it allows the measurement of different flows of compassion, and the use of autobiographical memories might give more reliable data than self-report measures. This narrative approach is also more similar to how compassion would be discussed in a clinical setting; thus the NCI gives us further information about how an individual may respond to discussing compassion in a therapeutic setting as opposed to a self-report measure of compassion.

However, self-self scores were found to be significantly lower than other NCI subscales, suggesting individuals in this sample found it more difficult to express or talk about self-compassion. These significantly lower scores may have had an impact on the results of correlation analysis as the low range of scores and lack of variance in the data for this subscale could explain the weaker correlation rather than a lack of correlation. We would expect lower levels of self-compassion in this population compared to a typical population as previous research has shown those with attachment insecurity appear to be less self-compassionate (Bistricky et al., 2017; Raque-Bogdan et al., 2011; Wei et al., 2011). It is possible the NCI was less able to measure the low rates of self-compassion in this pilot study which is a further limitation. A larger sample size would be required to investigate this further.

Clinical Implications

As discussed above, individuals' responses to compassion seems to be impacted by attachment insecurity. High levels of both attachment anxiety and avoidance has also been described as a fearful attachment (Brennan et al., 1991). Reis and Grenyer (2004) found this type of attachment also longitudinally predicted significantly more negative outcomes in patients with depression. They suggested these findings highlight the negative impact of both high attachment anxiety and avoidance on treatment response and suggest the avoidance of intimacy for fear of rejection appears to impede successful psychotherapy. They therefore suggest treatment should be tailored for these clients.

Self-compassion and a compassionate stance from a therapist may be more difficult to manage, or even disorienting, for individuals who score highly in both attachment anxiety and avoidance, who may have experienced past attachment figures as both a source of comfort and a source of fear. This is an important consideration as therapy may activate an individual's attachment system (as suggested by Mikulincer et al., 2007), which if high in both attachment anxiety and avoidance could present barriers to engagement in therapy and forming a positive working relationship. Eames & Roth (2000) found this type of attachment (e.g. fearful) to be associated with lower alliance ratings. Furthermore, securely attached individuals have been shown to engage more in therapy (Sauer, Lopez and Gormley, 2003). Indication of an individual's attachment style by using the PAM may be helpful in planning therapist approach. Information from the PAM could help inform a successful treatment approach given some therapies which use compassionate principles (e.g. CFT) may be potentially threatening for some individuals.

Both increasing self-compassion and attachment security is known to contribute to well-being and positive mental health outcomes (Neff, 2011a). Gilbert and Procter (2006) found self-compassion can be enhanced with practice and previous research from Neff and McGehee (2010) has suggested that it may be easier and more pragmatic for some individuals to learn how to be compassionate than to improve complicated relationships or work on increasing attachment security, especially if individuals are highly anxious or avoidant.

Finally, the NCI gives us good information regarding how compassion unfolds in narratives; this has potentially important implications for therapy and how therapists may work with compassion and approaches such as CFT. For example, it appears here that individuals with high in both anxious and avoidant attachment dimensions (possibly analogous of fearful attachment) may find it more difficult to discuss self-compassion than self-other compassion. Therefore, it may be less threatening for those with this attachment style to discuss self-other compassion before self-compassion in therapy.

Conclusions

In this study we were able to identify individuals who scored high on both attachment anxiety and avoidance dimensions. We found signals indicating these PAM scores appear to be negatively correlated with compassion. This pilot study discusses why this association may exist, builds on theory that attachment is related to compassionate abilities, e.g. that the competencies needed for compassion may be developmentally rooted, and places this within the context of the current literature. More evidence is needed to explore this further as to date most research looking at compassion and attachment has focused on self-compassion and not other flows of compassion.

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Appendices Contents

Appendix 1.1: British Journal of Clinical Psychology Author's Guidelines

Author Guidelines

The British Journal of Clinical Psychology publishes original contributions to scientific knowledge in clinical psychology. This includes descriptive comparisons, as well as studies of the assessment, aetiology and treatment of people with a wide range of psychological problems in all age groups and settings. The level of analysis of studies ranges from biological influences on individual behaviour through to studies of psychological interventions and treatments on individuals, dyads, families and groups, to investigations of the relationships between explicitly social and psychological levels of analysis.

All papers published in The British Journal of Clinical Psychology are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework.

The following types of paper are invited:

• Papers reporting original empirical investigations

• Theoretical papers, provided that these are sufficiently related to the empirical data

• Review articles which need not be exhaustive but which should give an interpretation of the state of the research in a given field and, where appropriate, identify its clinical implications

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

The word limit for papers submitted for consideration to BJCP is 5000 words and any papers that are over this word limit will be returned to the authors. The word limit does not include the abstract, reference list, figures, or tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length. In such a case, the authors should contact the Editors before submission of the paper.

3. Submission and reviewing

All manuscripts must be submitted via Editorial Manager. The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the terms and conditions of submission and the declaration of competing interests. You may also like to use the Submission Checklist to help you prepare your paper.
By submitting a manuscript to or reviewing for this publication, your name, email address, and affiliation, and other contact details the publication might require, will be used for the regular operations of the publication, including, when necessary, sharing with the publisher (Wiley) and partners for production and publication. The publication and the publisher recognize the importance of protecting the personal information collected from users in the operation of these

services, and have practices in place to ensure that steps are taken to maintain the security, integrity, and privacy of the personal data collected and processed. You can learn more at https://authorservices.wiley.com/statements/data-protection-policy.html.

4. Manuscript requirements

• Contributions must be typed in double spacing with wide margins. All sheets must be numbered.

• Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. You may like to use this template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the Project CRediT website for a list of roles.

• The main document must be anonymous. Please do not mention the authors' names or affiliations (including in the Method section) and refer to any previous work in the third person.

• Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.

• Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.

• All papers must include a structured abstract of up to 250 words under the headings: Objectives, Methods, Results, Conclusions. Articles which report original scientific research should also include a heading 'Design' before 'Methods'. The 'Methods' section for systematic reviews and theoretical papers should include, as a minimum, a description of the methods the author(s) used to access the literature they drew upon. That is, the abstract should summarize the databases that were consulted and the search terms that were used.

• All Articles must include Practitioner Points – these are 2–4 bullet points to detail the positive clinical implications of the work, with a further 2–4 bullet points outlining cautions or limitations of the study. They should be placed below the abstract, with the heading 'Practitioner Points'.

• For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.

• SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.

• In normal circumstances, effect size should be incorporated.

• Authors are requested to avoid the use of sexist language.

• Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright. For guidelines on editorial style, please consult the APA Publication Manual published by the American Psychological Association.

Appendix 1.2 Mixed Methods Appraisal Tool (Pluye et al., 2009)

Types of mixed methods study components or primary studies	Methodological quality criteria
3. Quantitative non-randomized Common types of design include (A) non-randomized controlled trials, and (B-C-D) observational analytic study or component where the intervention/exposure is defined/assessed, but not assigned by researchers. A. Non-randomized controlled trials The intervention is assigned by researchers, but there is no randomization, e.g., a pseudo-randomization. A non-random method of allocation is not reliable in producing alone similar groups. B. Cohort study Subsets of a defined population are assessed as exposed, not exposed, or exposed at different degrees to factors of interest. Participants are followed over time to determine if an outcome occurs (prospective longitudinal). C. Case-control study Cases, e.g., patients, associated with a certain outcome are selected, alongside a corresponding group of controls. Data is collected on whether cases and controls were exposed to the factor under study (retrospective). D. Cross-sectional analytic study At one particular time, the relationship between health-related characteristics (outcome) and other factors (intervention/exposure) is examined. E.g., the frequency of outcomes is compared in different population sub-groups according to the presence/absence (or level) of the intervention/exposure. Key references for observational analytic studies: Higgins & Green, 2008; Wells, Shea, O'Connell, Peterson, et al., 2009.	**3.1. Are participants (organizations) recruited in a way that minimizes selection bias?** At recruitment stage: For cohort studies, e.g., consider whether the exposed (or with intervention) and non-exposed (or without intervention) groups are recruited from the same population. For case-control studies, e.g., consider whether same inclusion and exclusion criteria were applied to cases and controls, and whether recruitment was done independently of the intervention or exposure status. For cross-sectional analytic studies, e.g., consider whether the sample is representative of the population. **3.2. Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes?** At data collection stage: E.g., consider whether (a) the variables are clearly defined and accurately measured; (b) the measurements are justified and appropriate for answering the research question; and (c) the measurements reflect what they are supposed to measure. For non-randomized controlled trials, the intervention is assigned by researchers, and so consider whether there was absence/presence of a contamination. E.g., the control group may be indirectly exposed to the intervention through family or community relationships. **3.3. In the groups being compared (exposed vs. non-exposed; with intervention vs. without; cases vs. controls), are the participants comparable, or do researchers take into account (control for) the difference between these groups?** At data analysis stage: For cohort, case-control and cross-sectional, e.g., consider whether (a) the most important factors are taken into account in the analysis; (b) a table lists key demographic information comparing both groups, and there are no obvious dissimilarities between groups that may account for any differences in outcomes, or dissimilarities are taken into account in the analysis. **3.4. Are there complete outcome data (80% or above), and, when applicable, an acceptable response rate (60% or above), or an acceptable follow-up rate for cohort studies (depending on the duration of follow-up)?**

Appendix 1.3

Table 1: Participant Race Characteristics

Study	White	Not Reported	South Korean	Black British/ African American	Asia (East & South)	Mixed race	Hispanic	Other	Native American	Hawaiian	Middle East	Total
Beard et al., 2017	131	-	-	1	-	-	-	7	-	-	-	139
Bistricky et al., 2017	115	-	-	3	3	-	3	7	1	-	-	132
Dudley et al., 2018	112	-	-	1	2	4	3	5	-	-	1	128
Homan, 2016	-	126	-	-	-	-	-	-	-	-	-	126
Joeng et al., 2017	-	-	473	-	-	-	-	-	-	-	-	473
Mackintosh et al., 2017	72	-	-	-	1	-	-	1			-	74
Pepping et al., 2015 (A)	-	329	-	-	-	-	-	-	-	-	-	329
Pepping et al., 2015 (B)	-	32	-	-	-	-	-	-	-	-	-	32
Raque-Bogdan et al., 2011	141	4	-	23	19	-	13	8	-	-	-	208
Raque-Bogdan et al., 2016	656	-	-	214	195	164	65	-	7	5	-	1306

Wei et al., 2011 (A)	186	-	-	2	2	2	2	1	-	-	-	195
Wei et al., 2011 (B)	113	7	-	6	3	2	2	-	3	-	-	136
Total	1526	498	473	250	225	172	88	31	11	5	1	3278
% of sample	46.5	15.9	14.1	7.5	6.7	5.2	2.7	0.9	0.3	0.2	0.04	100

Table 2: Summary of Statistics and Context of Findings

Study	Type of study	Measure of attachment	Measure of compassion	Mediation Model or Structural Equation Modelling (SEM)	Measure of effect size or beta-coefficient	Context of findings
Beard et al., 2017	Cross-sectional correlational	ECR-S (Wei et al., 2007)	SCS (Neff, 2003)	None	Attachment anxiety and self-compassion, r = -.468 ($p<0.01$), large effect size. Attachment avoidance and self-compassion, r= -.441 ($p<0.01$), large effect size.	Revealed a pronounced relationship between self-compassion and general well-being in gay mean.
Bistricky et al., 2017	Cross-sectional	Anxious and Avoidant Attachment Subscales of ECR-S (Wei et al., 2007)	SCS- SF (Raes et al., 2011)	SEM	Attachment avoidance and self-compassion, r= -.450, $p<0.001$, large effect size. In SEM avoidant attachment had a significant direct effect on self-compassion, b= – .475, $p<0.05$.	Higher frequency of interpersonal trauma was linked to higher avoidant attachment and lower self-compassion. This was associated with lower interpersonal competence, which correlated with greater posttraumatic stress symptoms.

Dudley et al., 2018	Cross-sectional online	RQ (Bartholomew and Horowitz, 1991)	SCS (Neff, 2003)	N/A as mediation analysis did not include compassion and attachment in same models.	Secure attachment and self-compassion r=0.38, p<0.003; large effect size. Fearful attachment and self-compassion r = -0.42, p<0.003; large effect size. Preoccupied and dismissing attachment were not significantly correlated with self-compassion.	In this population of adults currently hearing voices, mindful relation to voices and self-compassion are associated with reduced distress and severity of voices.
Homan, 2016	Cross-sectional	ECR (Brennan et al., 1998)	SCS-SF (Raes et al., 2011)	Mediation model; did not report *b* for pathways between attachment and self-compassion	Attachment anxiety and self-compassion were correlated, r=-0.60, p<0.01, strong effect size. Attachment avoidance and self-compassion were correlated, r= -0.49, p<0.01, strong effect size.	In this older adult study, attachment anxiety and avoidance, mediated by self-compassion, were inversely related to self-acceptance, personal growth, interpersonal relationship quality, purpose in life, and environmental mastery.
Joeng et al., 2017	Cross-sectional	Anxious and Avoidant Attachment subscales of Korean version (Kim,	Korean version (Kim et al, 2008) of SCS (Neff, 2003b)	SEM	Direct effect of avoidant attachment on self-compassion b= -.302, p< 0.001. Direct effect of anxious attachment on self-compassion	Insecure attachment effects on emotional distress in college student sample, predicted mediators of self-compassion and fears of compassion.

		2004) of ECR-RS (Fraley et al., 2000)			b= -.240, p<0.001	
Mackintosh et al., 2017	Cross-sectional	ECR-R (Fraley et al., 2000)	SCS (Neff, 2003)	Mediation Models	Self-compassion and attachment avoidance, *r*= -0.255, p<0.05; medium effect size. Self-compassion and attachment anxiety, *r*= -0.247, p<0.05; small - medium effect size. In an anxiety prediction model, attachment avoidance significantly predicted self-compassion, *b*= -.10, p=0.04. In an emotional distress model, attachment avoidance significantly predicted self-compassion, *b*= -.10, p=0.03.	Lower levels of self-compassion and higher attachment-related avoidance individually predicted more anxiety and overall emotional distress in a clinical population.
Pepping et al., 2015 (Study A)	Cross-sectional	ECR-R (Fraley et al., 2000)	SCS (Neff, 2003)	Mediation Model	Attachment anxiety and self-compassion were correlated, *r*= -.35, p <0.001; medium effect size.	Parenting received in childhood, at least as recalled retrospectively in adulthood, predicts attachment anxiety which in turn predicts low capacity for self-compassion in

					Attachment avoidance and self-compassion were correlated, *r*= -0.19, p<0.001; small effect size. In model of parenting experiences, attachment anxiety had a direct effect on self-compassion: (*b*= -.28, p<.001)	college students.
Pepping et al., 2015 (Study B)	Cohort, experimental	SAAM (Gillath et al., 2009)	SCS-SF (Raes et al., 2011)	N/A	In the experimental condition (where attachment security was manipulated) the difference between pre and post measures of state self-compassion was significant (*t*(15) = -2.29, p= .037), d= .55; medium effect size. In control condition difference between pre and post measure of self-compassion was not significant .	This study extended findings from study A above by experimentally enhancing attachment security which led to a significant increase in state self-compassion. A control group who did not have their attachment security altered did not show any change in state self-compassion.
Raque-Bogan et al., 2011	Cross-sectional	ECR-R (Fraley et al., 2000)	SCS (Neff, 2003)	Mediation Model	Attachment anxiety and self-compassion were correlated, *r*= -.43, p <0.01; large effect size. Attachment avoidance and self-	Self-compassion and mattering were examined as potential mediators between adult attachment and mental and physical health in

					compassion were correlated, r= -0.19, p<0.01; small effect size. In a model predicting mental health, attachment anxiety had a direct effect on self-compassion: (b= -.20, p<.001). In the same model attachment avoidance had a direct effect on self-compassion (b= -.10, p<0.01).	college students. Attachment anxiety and avoidance were strongly correlated to the mental health component of functional health, mediated by mattering and self-compassion.
Raque-Bogdan et al., 2016	Cross-sectional	ECR-RS (Fraley et al., 2011)	SCS (Neff, 2003)	SEM	Maternal anxiety correlated with self-compassion, r=-0.17, p<0.001; small effect size Peer anxiety correlated with self-compassion, r=-0.36, p<0.001; medium effect size Romantic anxiety correlated with self-compassion, r=-0.38, p<0.001; medium to large effect size. Overall SEM shows both peer attachment anxiety (b= -.077, p<0.001) and romantic attachment anxiety (b= -.069,	Using structural equation modelling, this cross-sectional study examined a model of body appreciation in college women.

					p<0.001) mediated the relationships between maternal attachment anxiety and SC.	
Wei et al., 2011 (A)	Cross-sectional	ECR (Brennan et al., 1998)	SCS (Neff, 2003)	Mediation Model	Attachment anxiety and self-compassion were correlated, *r*= -.38, p <0.01; large effect size. Attachment avoidance and self-compassion were correlated, *r*= -0.15, p<0.05; small effect size. In model of subjective wellbeing, attachment anxiety had a direct effect on self-compassion: (*b*= -.37, p<.001). In the same model attachment avoidance had a direct effect on self-compassion, however this was not significant (*b*= -.07, p>0.05).	An examination of whether the association between attachment anxiety and subjective well-being was mediated by self-compassion in college students.
Wei et al., 2011 (B)	Cross-sectional	ECR (Brennan et al., 1998)	SCS (Neff, 2003)	Mediation Model	Attachment anxiety and self-compassion were correlated, *r*= -.38, p <0.01; large effect size. Attachment avoidance and self-compassion were correlated, *r*=	This study strengthened the findings from study A above by replicating the method in a sample of community adults. These findings also suggested that self-

	-0.36, p<0.01; medium effect size. In model of subjective wellbeing, attachment anxiety had a direct effect on self-compassion: (*b*=0-.29, p<.001). In the same model attachment avoidance had a direct effect on self-compassion (*b*=0-.24, p<0.01).	compassion mediated the association between attachment anxiety and subjective well-being.

Table 3: Covariates reported by study

Study	Covariates reported
Beard et al., 2017	General wellbeing, internalised sexuality stigma, self-esteem and pride
Bistricky et al., 2017	PTSD symptoms, trauma history, and interpersonal competence
Dudley et al., 2018	Mindfulness of voices
Homan, 2016	Eudemonic wellbeing
Joeng et al., 2017	Fears of Compassion (Self-Compassion scale only), depression, and anxiety
Mackintosh et al., 2017	Anxiety, depression and interpersonal problems
Pepping et al., 2015 (Study A)	Recollections of parenting
Pepping et al., 2015 (Study B)	None
Raque-Bogdan et al., 2011	Body Appreciation
Raque-Bogdan et al., 2016	Mattering, mental and physical health
Wei et al., 2011 (Study A)	Emotional empathy to others and wellbeing
Wei et al., 2011 (Study B)	Emotional empathy to others and wellbeing

Appendix 2.1 Major Research Project Proposal

DOCTORATE IN CLINICAL PSYCHOLOGY

Name: Kathleen Singer

Matriculation Number: 0800773s

Name of Assessment: MRP Proposal

Title of Project:

Disorganised attachment and compassion at assessment within an adult Psychology service population.

Academic Supervisor: Prof Andrew Gumley

Field Supervisor: Dr Maureen Seils

Submission Date to Supervisor: 29.01.17

Version Number: 4

Word Count: 3, 025

Abstract

Humans share a universal and evolutionary need to form close affectional bonds – attachments - with others in order to feel safe and secure (Bolwby, 1969/1982). Attachment theory provides a framework for conceptualising an individual's developmental knowledge of human interactions.

An individual's unique application of their attachment experiences, and resultant behaviour, in interpersonal relationships is known as their attachment organisation. A minority of individuals (around 15%) lack a coherent organisation in their response to attachment related stressors (e.g. the presence of a stranger, separation and reunion) and are therefore said to display disorganised attachment (Ainsworth, 1979) which has been associated with a variety of complex mental health issues.

Furthermore, evidence suggests attachment is associated with compassion, which is an important factor for effective therapy. From a theoretical perspective, self-compassion and a compassionate stance from/to others may be more difficult to manage, or even disorienting, for individuals with disorganised attachment who have experiences of previous attachment figures who trigger "fright without solution". This may influence patient's responses to the therapist and the therapeutic relationship, and thus the efficacy of therapy.

Using the Psychosis Measure of Attachment (PAM; Berry et al., 2006) for an adult population at assessment we will describe patterns of attachment including disorganisation (Bucci et al., 2017). This study aims to explore the association between attachment disorganisation (as measured by the PAM) and compassion, measured using the Narrative

Interview for Compassion. It is hypothesised that those who are classified as disorganised in their attachment will show lower levels of compassion for others and for self.

Introduction

Humans share a universal and evolutionary need to form close affectional bonds with others in order to feel safe and secure (Bolwby, 1969/1982), through seeking comfort, and soothing and protective closeness (Ainsworth, 1979). These bonds also provide a secure base which enables recipients to develop competences that underpin independence and autonomy. Attachment theory provides a framework for conceptualising an individual's developmental knowledge of human interactions based on close affectional bonds (Bowlby, 1969/1982).

Infants' experiences of their relationships with their primary caregivers are internalised and influence future interactions; acting as implicit 'blueprints' for interpersonal relationships known as internal working models (IWM; Bretherton, 1999), which are subject to revision over time. An individual's IWM influences their perception of themselves and others as well as regulating their affect, and psychological functioning, in other interpersonal experiences.

An individual's unique application of their IWM, and resultant behaviour, in interpersonal relationships is known as their attachment organisation. In infancy, there are three organised attachments: secure, insecure-avoidant, or insecure-ambivalent. However, a minority (around 15%) lack a coherent organisation in their response to attachment related stressors (e.g. the presence of a stranger, separation and reunion) and are therefore said to display disorganised attachment (Ainsworth, 1979).

Disorganised attachment behaviour is posited to arise from two divergent systems present from birth: the attachment system and the defence system (i.e. fight or flight response). Infants whose primary caregiver (i.e. the figure who activates and influences their attachment system) who is their perceived protector/solution against harm or distress, but is also a figure who activates their defence system (i.e. if they are a direct or indirect source of fear or threat) experience a clash of their systems. That is the attachment figure simultaneously acts as the source of security and the source of fear. Continued experiencing of a caregiver who through their confusing, frightening, frightened, or hostile approaches activates a flight or fight response, whilst simultaneously experiencing an urge to seek comfort from them, the infant is left with conflicted feelings and perceptions culminating in a 'fright without solution' situation (Cassidy & Mohr, 2001).

Research has shown that individuals with psychological disorders are more likely to have insecure or disorganised attachments compared to a typical population; but there exist few definitive studies of adults that link specific insecure or disorganised attachment styles to specific diagnostic categories (Dozier, Stovall & Albus, 1999). In part this lack of association arises because insecure attachment is functional in its context and can be understood as an important resilience factor. However, attachment disorganisation has been shown to be a powerful predictor of a range of later social and cognitive difficulties and psychopathology in children (Green & Goldwyn, 2002). Disorganised attachment in infancy has also been associated with vulnerability for a variety of mental health issues in adulthood; such as dissociative disorders (Ogawa et al., 1997), borderline personality disorder (Holmes, 2004), complex trauma (environments associated with disorganised attachment increase risk of further exposure to trauma or loss; Ogawa et al, 1997) and depression (Bureau, Easterbrooks, and Lyons-Ruth, 2009).

Bowlby (1988) described the role of the therapist as analogous to that of an attachment figure. In therapy, the therapist provides a secure base from which to "explore and express thoughts and feelings", whilst maintaining a safe haven in their working relationship with patients in order to allow them to experience vulnerability, distress, etc. Flexibility to move between these two roles is an important function of caregiver behaviour. This complex therapeutic relationship is often further complicated by the knowledge that many patients will present to therapy with a history of difficulties in relationships/attachments; their attachment styles and IWMs may reflect these and therefore present difficulties for forming a positive working relationship.

The Narrative Interview for Compassion was developed by Gumley and MacBeth (2014) and is rooted in an attachment-based conceptualisation of compassion. Compassion is twofold: a sensitive, caring and warm awareness of pain and suffering experienced by oneself and others; and motivation to appropriately comprehend and alleviate suffering. The foundation of these abilities are competencies that seem rooted in attachment theory. Gumley and MacBeth (2014) propose that security of attachment facilitates development of these abilities that enable capacity to detect and engage with distress, in others and ourselves, in a bid to alleviate pain and distress, and restore wellbeing, e.g. one's ability to be compassionate is developmentally organised.

The ability to be compassionate towards oneself is promoted in psychotherapy by a compassionate therapist. From a theoretical perspective, self-compassion and a compassionate stance from others may be more difficult to manage, or even disorienting, for individuals with disorganised attachment who have experiences of previous attachment figures who trigger "fright without solution". This may influence patient's responses to the therapist and the therapeutic relationship.

This study aims to explore disorganised attachment within a complex mental health population who may present with long-standing interpersonal problems and complex trauma; areas long implicated in attachment research (George and West, 1999). In addition, this study aims to explore more explicitly the associations between disorganised attachment and compassion by using a Narrative Interview for Compassion.

Aims & hypotheses

Aims

Using the PAM (Berry et al., 2006) for an adult population at assessment we will describe patterns of attachment including disorganisation (Bucci et al., 2017). This study aims to explore the association between attachment disorganisation (as measured by the PAM) and compassion measured using the Narrative Interview for Compassion.

Hypotheses

It is hypothesised that those who are classified as disorganised in their attachment will show lower levels of compassion for others and for self.

Plan of Investigation

Participants

Participants will be under the care of NHS Ayrshire and Arran (NHS A&A) mental health services. The recruitment site will be the Psychological Services clinic in South Ayrshire. Eligible participants will be drawn from South Psychology assessment clinics and/or individual assessment slots.

Inclusion and Exclusion Criteria

Individuals will be between 18 and 64 years of age, and will be excluded if head injury or organic disorder is adjudged the primary cause of the individual's symptomatology. Individuals will be judged by the clinical team as able to exercise capacity to consent.

Attachment style will be assessed by PAM scores using a scoring index developed by Bucci, Emsley and Berry (2017). Individuals with disorganised attachment score highly on both anxious and avoidant attachment dimensions of the PAM; externally they are individuals who show a less coherent approach in regulating their affect or having their attachment needs met.

Recruitment and research procedures

Participants will be recruited via monthly South Psychology service assessment clinics and/or individual assessment slots. The assessment clinic structure allows for clinicians and patients to meet for 45 mins before a break. See flow diagram of recruitment and research procedures (Figure 1; appendix 1).

At both stages, participants will be informed that their participation is voluntary, and they will be informed of the aims and procedures involved in the study to ensure informed consent.

At the interview stage, participants will meet with the researcher for approximately 1 hour. The session presents an opportunity to provide further details to participants regarding the compassion interview, and address any concerns participants may have regarding the research process and material discussed in the sessions.

Measures

The Adult Attachment Interview (AAI; Main, George and Kaplan, 1985) is comprehensive and reliable, however it is time-consuming to administer and other measures have been shown as less reliable, or less than comprehensive (Ravitz et al., 2010). Therefore, it is imperative that a suitable, reliable and valid attachment measure is used to effectively measure attachments in an adult population before intervention occurs.

Psychosis Attachment Measure (PAM)

The 16-item PAM (Berry et al., 2006) is a self-report measure based on existing measures of attachment (Bartholomew & Horowitz, 1991), which assesses two dimensions of anxious and avoidant attachment. Participants' rate statements regarding the extent to which believe they currently relate to key people in their life ('not at all' to 'very much') on a four-point Likert scale. Total scores are calculated for each dimension by averaging item scores, with higher scores reflecting greater anxiety and avoidance. Acceptable levels of internal consistency have been demonstrated across studies (Gumley & MacBeth, 2014).

Narrative Interview for Compassion (NCI)

This is a 30-45 minute semi-structured interview, measuring an individual's experience of compassion towards the self and others (Gumley & Macbeth, 2011). It is scored by the researcher via a coding frame applied to the transcribed interview. The coding frame permits coding of manuscripts via bottom-up analysis of features of the narrative structure; and top-down analysis of the interview themes.

The interview explores different expressions of compassion; namely self-oriented (compassion towards oneself), other-oriented compassion (compassion from others, and to others). The interview is designed to access compassion related thoughts, feelings and

behaviours by providing an opportunity for the interviewee to discuss autobiographical memories and reflections of potentially stressful interpersonal experiences.

Design

A relational design will be used to evaluate the correlation between attachment style and scores of different expressions of compassion.

Data Analysis

Analyses to explore the association between disorganised attachment and compassion will largely be descriptive and correlational. Scores on PAM will be correlated with scores of compassion derived from the narrative compassion interview using Pearson or Spearman correlations.

A Narrative Compassion Coding System developed by Gumley and MacBeth (2013) will be used to code the Narrative Interview. Four subscales for coding exist and each question will be given a score of -1 to 9 depending on the level of understanding or compassion exhibited through report of experiences of examples.

For example, a score of -1 ‘Anti-Compassionate’ in self-self compassion scale is coded with: “The attitude towards oneself as evidenced in the transcript reveals a harsh, cruel and actively non-compassionate stance towards the self. Self may be regarded as superior, stronger and more deserving.” A score of 9 for ‘Exceptional Compassion’ is scored with “…what we observe within the transcript is a clarity of thought and mind where there is a sense of an integrated and elaborated compassionate understanding of the self.”

Justification of Sample Size

This is the first study to investigate the relationship between disorganised attachment as measured by PAM, and compassion as measured by the Narrative Compassion Interview. From studies of attachment theory and the development of compassion from an attachment framework, we expect a moderate correlation between disorganised attachment and compassion. An experimental hypothesis was adopted that there would be a moderate correlation of *r*= 0.5, with a null hypothesis of a negligible correlation of *r*= 0.1. Using a conventional significance level of alpha =0.05, and a power of 0.8, sensitivity analyses estimated a sample size of n=41 would be required to adequately evaluate the primary hypothesis. It is unlikely that the resources available to conduct the study will be adequate to recruit 41 participants. However, the study will provide the basis for a more accurate estimation of sample size to base future research initiatives.

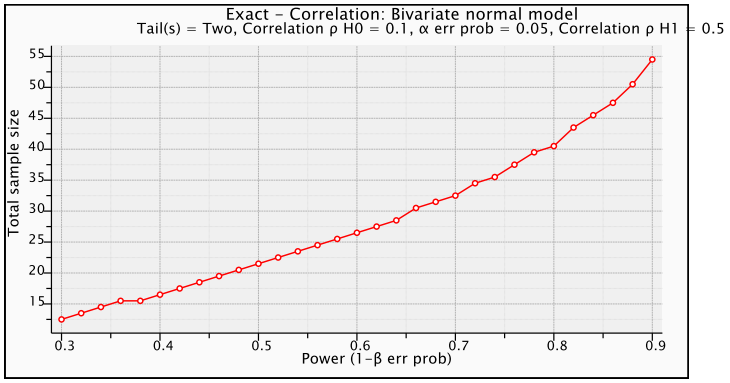

Figure 2: Sensitivity Analysis of Power by Sample Size

Settings and Equipment

All participant interviews will be conducted in NHS A&A clinics. The PAM will be completed with pencil and paper. The compassion interview will be recorded using a digital recording device.

Health and safety issues

Participating clinical teams will liaise with the researcher in regards to clinical and risk issues pertaining to any potential participants. Researchers will carry a personal alarm.

Participants will be made aware that participation is voluntary, they can withdraw at any time, and informed consent will be sought. Clinical judgement will be used to monitor potential distress during the interviews, and if necessary the interview will be paused, ended or deferred. All participants will be provided with an opportunity at the end of the interview to reflect on their experiences of the study. Although the likelihood of participant distress arising from participation in this study is likely to be low, any participants experiencing distress will be provided with an opportunity to discuss this with the researcher and if indicated the researcher will facilitate participants in seeking further support.

Ethical issues

Ethics submission will be made to A&A NHS REC. Management approval from NHS A&A R&D will be sought after ethical approval. All data will be stored in locked filing cabinets or password protected databases after anonymization. Recording of the interviews will be destroyed following transcription. All transcripts will be anonymised using the Find and Replace function in word: e.g., Name replaced with {Person 1, 2, 3 etc.}, place with {Location 1, 2, 3 etc.} thus ensuring direct and indirect threats to identification are minimised. Participants will also be informed that quotations will be used in the presentation of results.

An ethical issue is the potential disclosure of information by participant indicating risk to self or others. Participants will be informed to the limitations of confidentiality prior to consent. Where the researcher identifies a risk of harm to self and others they communicate this to appropriate individuals or agencies. The researcher will always endeavour to discuss this with the participant before hand and explain clearly their reasoning for taking such actions.

Financial issues

Photocopying costs of £10 are estimated for sufficient copies of the measures. Cost of paper is estimated at £4.36. Narrative interviews will be transcribed by the researcher. No other substantive costs are envisaged. Total cost estimated at £14.36.

Timetable

Liaison period with local clinical teams from August 2016 to October 2017. Recruitment period from October 2017 to April 2018, measurement phase running concurrent to recruitment till May 2018. Data analysis and write up from May 2018 to July 2018.

Practical applications

Clinical testing of the Narrative Compassion Scale, the PAM and any correlation within this population will inform future research and clinical interventions that target compassion and affect regulation, as well as attachment theory. Knowledge of participants' attachment styles will also inform clinical practice, and possibly mediate the resolution of engagement issues.

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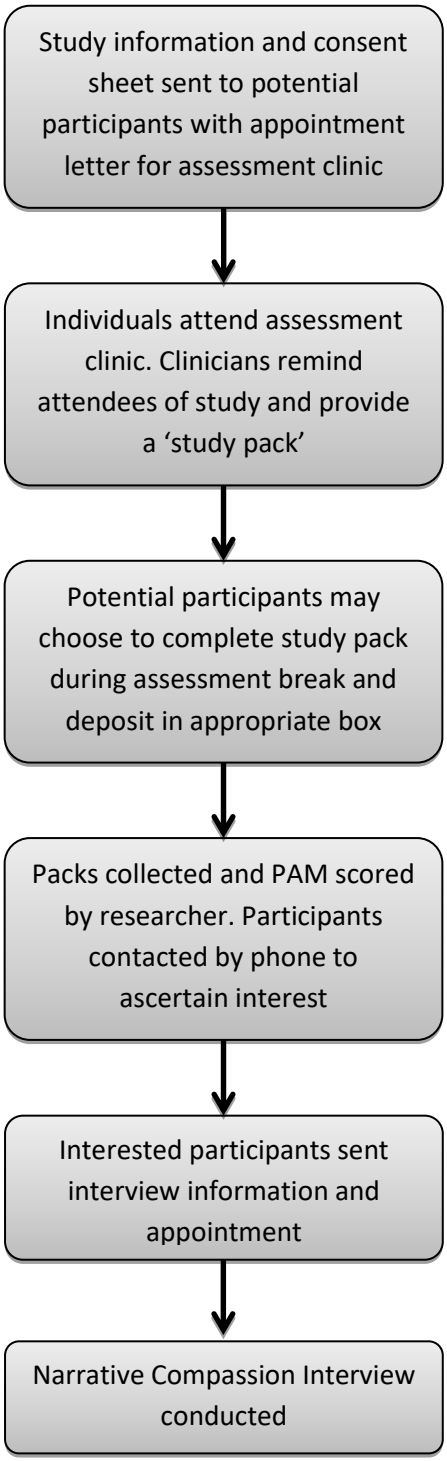
MRP Proposal: Appendix 1:

Figure 1: Flowchart of recruitment and research procedures



MRP Proposal: Appendix 2: Plain English Summary

Disorganised attachment and compassion at assessment within an adult population.

Background

Humans share a universal and evolutionary need to form close bonds with others in order to feel safe and secure (Bolwby, 1969/1982). Attachment theory is the name given to the how we understand these bonds and how they develop from the bonds we have with people who are close to us (Bowlby, 1969/1982).

Infants' experiences of their early relationships act as 'blueprints' for future interactions, and influence how they think of themselves and others - this 'blueprint' is known as their attachment style. There are three attachment styles that are organised and consistent. However, a minority of people have a disorganised approach (Ainsworth, 1979) which has been associated with a variety of complex mental health issues. Evidence suggests attachment is associated with compassion which is an important factor for effective therapy.

Aims

This study aims to explore disorganised attachment, and its links with compassion, within a general clinical adult population.

Methods

Participants

Participants in Ayrshire and Arran aged between 18-64 who attend an outpatient clinic for assessment of mental health issues will be invited to participate. They will be excluded if they have a head injury.

Design and procedures

Individuals with disorganised attachment and those who display types of organised attachment will be recruited; this is a relational correlation design study.

Participants will be sent information about the study with their assessment appointment letter. At the assessment they can choose to complete an attachment questionnaire. Some who complete the questionnaire will be invited to attend an interview about compassion (approx. 1 hour).

Measures

Psychosis Attachment Measure (PAM)

This is a questionnaire regarding thoughts, feelings and behaviours in close interpersonal relationships.

Narrative Interview for Compassion

This is a 30-45 minute interview, measuring an individual's experience of compassion towards the self and others.

Ethical Issues

All data will be stored in locked filing cabinets or password protected databases. Recording of the interviews will be destroyed following transcription.

Participants will be advised that their participation is voluntary and they are free to withdraw at any time. An ethical issue is the potential disclosure of information by participant indicating. Participants will be made aware prior to consent that disclosure of risk would trigger a breach of confidentiality and the specific information would be discussed with local services under a duty of care.

Practical Applications and Dissemination

Testing of the questionnaire, the interview and any links within this population will help future research and treatments that target compassion and attachment theory.

The study will be disseminated among Psychology peers, and NHS A&A teams who work with adults with complex mental health needs.

References

Ainsworth, M. D. S. (1979). Attachment as related to mother-infant interaction. *Advances in the study of behavior, 9*, 1-51.

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Word Count: 480

MRP Proposal: Appendix 3: Health and Safety Form

WEST OF SCOTLAND/ UNIVERSITY OF GLASGOW

DOCTORATE IN CLINICAL PSYCHOLOGY

HEALTH AND SAFETY FOR RESEARCHERS

1. Title of Project	A feasibility study of disorganised attachment and compassion at assessment within an adult Psychology service population.
2. Trainee	*Anonymised for blind marking*
3. University Supervisor	*Anonymised for blind marking*
4. Other Supervisor(s)	
5. Local Lead Clinician	*Anonymised for blind marking*
6. Participants: (age, group or sub-group, pre- or post-treatment, etc)	18-64, individuals presenting to an adult mental health Psychology service assessment clinic in South Ayrshire with either disorganised or organised attachment.
7. Procedures to be applied (eg, questionnaire, interview, etc)	<u>Psychosis Attachment Measure (PAM)</u> The 16-item PAM is a self-report measure based on the existing measures of attachment. The items refer to thoughts, feelings and behaviours in close interpersonal relationships, but do not refer

	specifically to romantic relationships. The participants rate the extent to which each item is characteristic of them using a 4-point scale. <u>Narrative Interview for Compassion</u> This is a 30-45 minute semi-structured interview, measuring an individual's experience of compassion towards the self and others. It is scored by the researcher via a coding frame applied to the transcribed interview. The coding frame permits coding of manuscripts via bottom-up analysis of features of the narrative structure; and top-down analysis of the interview themes.
8. Setting (where will procedures be carried out?) i) Details of all settings	CMHT outpatient clinic space based at Arrol Park, Ayr
ii) Are home visits involved	Y/**N**

WEST OF SCOTLAND/ UNIVERSITY OF GLASGOW

DOCTORATE IN CLINICAL PSYCHOLOGY

HEALTH AND SAFETY FOR RESEARCHERS

9. Potential Risk Factors Considered (for researcher and participant safety): i) Participants ii) Procedures iii) Settings	i) Potential disclosure of information by participant indicating risk to self or others. Participants will be made aware prior to consent that disclosure of risk would trigger a breach of confidentiality and the specific information would be discussed with local services under a duty of care. ii) See i) iii) The setting is an outpatient NHS clinic and has procedures in place to minimise risk to staff.
10. . 10. Actions to minimise risk (refer to 9) i) Participants ii) Procedures iii) Settings	i) Clinical judgement will be used to monitor potential participant distress during the interviews, and if necessary the interview will be paused, ended or deferred. All participants will be debriefed regarding their experience during the session and if necessary participants will be offered subsequent sessions or support by the clinical team. ii) See i) iii) Panic alarms will be available to the researcher following all local protocols of use

Trainee signature Date: 30.01.17

University supervisor signature: ..... Date: .....

MRP Proposal: Appendix 4: Equipment Cost Form

RESEARCH EQUIPMENT, CONSUMABLES AND EXPENSES

Trainee … *Anonymised for blind marking* ……

Year of Course ……2nd ……. **Intake Year**…… 2015…..

Please refer to latest stationary costs list (available from student support team)

Item	**Details and Amount Required**	**Cost or Specify if to Request to Borrow from Department**
Stationary	2 x ream white paper	Subtotal: £4.36
Postage		

		Subtotal:
Photocopying and Laser Printing	B&W print 200pgs	Subtotal: £10
Equipment and Software	Digital recorder sought free of charge from health board or University of Glasgow. Transcription pedal – to be sourced for free form University of Glasgow.	Subtotal: £0
Measures	Psychosis Attachment Measure – sourced for free	Subtotal:
Miscellaneous		Subtotal:
Total		£14.36

For any request over £200 please provide further justification for all items that contribute to a high total cost estimate. Please also provide justification if costing for an honorarium:

Trainee Signature: Date: 30.01.17

Supervisor's Signature …….. Date ……

Appendix 2.2: Copy of Ethics and R&D Approval Letters

WoSRES
West of Scotland Research Ethics Service

NHS
Greater Glasgow and Clyde

West of Scotland REC 5
West of Scotland Research Ethics Service
West Glasgow Ambulatory Care Hospital
Dalnair Street
Glasgow
G3 8SJ

Ms Kathleen J Singer
Trainee Clinical Psychologist
NHS Ayrshire and Arran
University of Glasgow Mental Health and Wellbeing
Admin Building, Gartnavel Hospital
1055 Great Western Road, Glasgow
G12 0XH

Date 23 November 2017

Direct line 0141 232 1809
E-mail WoSREC5@ggc.scot.nhs.uk

Dear Ms Singer

Study title: **Attachment and compassion in an adult population**
REC reference: **17/WS/0229**
IRAS project ID: **228175**

Thank you for your response received on 22 November 2017. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 21 November 2017.

Documents received

The documents received were as follows:

Document	*Version*	*Date*
Participant consent form [Consent Form - Stage 2]	0.3	22 November 2017
Participant information sheet (PIS) [Participant Information Sheet - for appointment letter]	0.3	22 November 2017
Participant information sheet (PIS) [Participant Information Sheet - Stage 1]	0.3	22 November 2017
Participant information sheet (PIS) [Participant Information Sheet - Stage 2]	0.3	22 November 2017

Approved documents

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

Document	*Version*	*Date*
GP/consultant information sheets or letters [GP letter]	0.2	11 August 2017
Interview schedules or topic guides for participants [Interview Schedule for Narrative Interview for Compassion]		
Interview schedules or topic guides for participants [Narrative Compassion Coding System]		
Letter from funder [University of Glasgow Approval]		12 May 2017

NHS Ayrshire & Arran

Research & Development
58 Lister Street
University Hospital Crosshouse
Kilmarnock
KA2 0BB

Ms Kathleen Singer
Trainee Clinical Psychologist
University of Glasgow
Admin Building
Gartnavel Hospital
1055 Great Western Road
Glasgow
G12 0XH

Date 27 November 2017
Your Ref
Our Ref AG/KLB/NM R&D 2017AA078

Enquiries to Karen Bell
Extension 25850
Direct line 01563 825850
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Email Karen.Bell2@aapct.scot.nhs.uk

Dear Ms Singer

Attachment and compassion in an adult population

I confirm that NHS Ayrshire and Arran have reviewed the undernoted documents and grant R&D Management approval for the above study.

Documents received:

Document	Version	Date
SSI form	Version 5.6.0	16 October 2017
Protocol	Version 1.1	27 September 2017
R&D Form	Version 5.6.0	17 October 2017
CONSENT FORM - Stage 1	Version 0.2	11 August 2017
CONSENT FORM - Stage 2	Version 0.3	22 November 2017
GP letter	Version 0.2	11 August 2017
Patient Information Sheet - appt letter	Version 0.3	22 November 2017
Patient Information Sheet - stage 1	Version 0.3	22 November 2017
Patient Information Sheet - stage 2	Version 0.3	22 November 2017
Narrative Compassion Coding System	No version	No date
Narrative Interview For Compassion	No version	No date
PAMSR	Version 0.1	25 June 2017

The terms of approval state that the investigator authorised to undertake this study within NHS Ayrshire & Arran is: -

- Dr Maureen Seils, Consultant Clinical Psychologist, NHS Ayrshire & Arran

Appendix 2.3: Psychosis Attachment Measure (PAM)

PAM self-report

We all differ in how we relate to other people. This questionnaire lists different thoughts, feelings and ways of behaving in relationships with others. Thinking generally about how you relate to other key people in your life, please use a tick to show how much each statement is like you. Key people could include family members, friends, partner or mental health workers.

There are no right or wrong answers

	Not at all	**A little**	**Quite a bit**	**Very much**
1. I prefer not to let other people know my 'true' thoughts and feelings.	(.0.)	(.1.)	(.2.)	(.3.)
2. I find it easy to depend on other people for support with problems or difficult situations.	(.3.)	(.2.)	(.1.)	(.0.)
3. I tend to get upset, anxious or angry if other people are not there when I need them.	(.0.)	(.1.)	(.2.)	(.3.)
4. I usually discuss my problems and concerns with other people.	(.3.)	(.2.)	(.1.)	(.0.)
5. I worry that key people in my life won't be around in the future.	(.0.)	(.1.)	(.2.)	(.3.)
6. I ask other people to reassure me	(.0.)	(.1.)	(2.)	(.3.)

that they care about me.				
7. If other people disapprove of something I do, I get very upset.	(.0.)	(.1.)	(.2.)	(.3.)
8. I find it difficult to accept help from other people when I have problems or difficulties.	(.0.)	(.1.)	(.2.)	(.3.)
9. It helps to turn to other people when I'm stressed.	(.3.)	(.2.)	(.1.)	(.0.)
10. I worry that if other people get to know me better, they won't like me.	(.0.)	(.1.)	(.2.)	(.3.)
11. When I'm feeling stressed, I prefer being on my own to being in the company of other people.	(.0.)	(.1.)	(.2.)	(.3.)
12. I worry a lot about my relationships with other people.	(.0.)	(.1.)	(.2.)	(.3.)
13. I try to cope with stressful situations on my own.	(.0.)	(.1.)	(.2.)	(.3.)
14. I worry that if I displease other people, they won't want to know me anymore.	(.0.)	(.1.)	(.2.)	(.3.)
15. I worry about having to cope with problems and difficult situations on my own.	(.0.)	(.1.)	(.2.)	(.3.)

16. I feel uncomfortable when other people want to get to know me better.	(.0.)	(.1.)	(.2.)	(.3.)

Scoring

Anxiety subscale (item 3 + item 5 + item 6 + item 7 + item 10 + item 12 + item 14 + item 15) / 8

Avoidance subscale (item 1 + item 2 + item 4 + item 8 + item 9 + item 11 + item 13 + item 16) / 8

Appendix 2.4: Narrative Compassion Interview

Narrative Interview For Compassion--Revised (NCS--R)

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 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.

<u>Administration of questions</u>

- 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 prompts 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.

Appendix 2.5: Narrative Compassion Scale Coding Framework

Please cite as: Gumley A. & Macbeth A (2013) Narrative Compassion Coding System. Unpublished Manuscript, University of Glasgow.

Narrative Compassion Coding System

Authors:

Andrew Gumley & Angus Macbeth

Introduction:

Compassion is widely understood to as a sensitivity to suffering and pain in oneself and in others combined with the sincere motivation and intention to alleviate pain and distress. Compassion is an affiliative social mentality linked to the formation and maintenance of supportive relationships. It is a social mentality reflecting and recognising the fundamental importance of the inter-dependence and connectivity between beings. From this relational point of view compassion involves the co-regulation of two attachment competences: *safe haven* and *secure base*.

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.

Situating compassion within a relational framework acknowledges that compassion flows between others, between oneself and others and within oneself. In this way compassion can materialise as an expression towards others, as an experience of others expressing compassion towards the self and as a form of self-expression (otherwise referred to as self compassion). Blocks to the expression of compassion can occur at different points in this flow. For example blocks to expressing compassion can be related to a fears of compassion. For example, the by expressing of kindness to others, individuals might worry that they are seen as weak and vulnerable to exploitation. Others expressing compassion to the self can create distress via 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.

In this way blocks to self-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 people might be able to describe what compassion means in terms of the competences and attributes outlines above, their experiences of compassion at different points in the flow may be different. Therefore exploring individuals' understandings and portrayal of compassion may provide an additional means of exploring blocks to experiencing compassion.

Coding Compassion

In coding compassion, descriptions and experiences of compassion can occur in 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 are given a different weighting to other types of questions that "permit" discussion of compassion (e.g. tell me about yourself?). Where a demand question results in difficulties describing what compassion is or portraying an experience of compassion this will lower the overall score assigned. Where experiences of compassion are freely explored without direct prompting then this will increase the overall score assigned.

In addition, when coding portrayal of compassion, look beyond simple descriptions of attributes and look for specific autobiographical memories detailing the exchange or communication of compassion. In addition, look for in the moment portrayals of a compassionate stance in how the individual is speaking. For example, remembering a painful experience, the speaker might describe a compassionate feeling that they are experiencing in the hear and now. Also in coding compassion, consider carefully that compassion is expressed in the context of suffering so it is important to give the speaker time and space to express and articulate memories.

Compassionate Understanding Scale

-1 Anti-Compassionate

Discourse in the speaker's transcript reveals evidence of a rejecting and non-collaborative stance to exploring what compassion means. They may ridicule the interviewer or question any value in coming to a shared understanding.

1 Lacking in understanding

There is an absence of compassionate understanding reflected in a very limited awareness of compassion, limited description or highly stereotyped.

3 Minimal but present understanding

We see the development of compassionate understandings reflected in some efforts towards understanding different dimensions of compassion. This may be limited to a more one dimensional understanding that is reminiscent of expressing normative responses to difficult situations or other developmentally salient expectations (e.g. nurturing a child).

5 Emergent understanding

On the whole the speaker maintains an understanding of compassion and describes attributes reasonably freely. This may be more limited to safe haven type attributes and there may be more limited reflection on aspects of compassion involving the alleviation of suffering.

7 Marked understanding

The transcript is striking in that an understanding of compassion is displayed with respect to aspects of safe haven and secure base and also with respect to aspects of flow. For example the person might also describe compassion towards oneself and others spontaneously.

9 Exceptional understanding

The description of compassion is sophisticated indicating a strong appreciation of compassion as a sensitivity to suffering in both self and in others and also the clear appreciation of the motivation to alleviate suffering in oneself and others.

Self to Other Compassion Scale

-1 Anti-Compassionate

Discourse in the speaker's transcript reveals evidence of attitudes and beliefs indicating a harsh, cruel and actively non-compassionate stance towards others. Other's distress or suffering is likely to be denigrated.

1 Lacking in self to other compassion

There is an absence of compassionate responses towards others. There may be a tendency to normalise, minimised the impact, or be upbeat in relation to difficult experiences but evidence of a real sense of an attentional and / or behavioural orientation that is caring, warm, sensitive and empathising is absent. This does not necessarily mean that the transcript is especially cold or repudiating of compassionate responses.

3 Minimal but present self to other compassion

We see the development of compassionate responses and understandings reflected in some efforts towards empathic understanding, forgiveness, acceptance and understanding of others experiences, particularly in periods of stress. It may be that these responses are implicit and there is little or no evidence of an explicitly compassionate stance reflecting clear unambiguous statements of compassion towards others, for example forgiveness and acceptance. These transcripts tend to show a brief, unexamined valuing of one's ability to provide support to others, and the value of relationships. Alternatively, it may be that compassion towards others is expressed with some difficulty and that the stance is not embellished or maintained. In this case critical responses may emerge or avoidant responses become re-established.

5 Emergent self to other compassion

On the whole the speaker maintains a compassionate stance towards others reflected in expressions of understanding, warmth, forgiveness, empathy, sympathy and courage. This is reflected in a number of explicit and direct compassionate statements. However, It may be that the stance may not be maintained consistently in relation to all aspects of experience and the rater may note some significant areas of difficulty in maintaining a compassionate and non-judgemental attitude towards the others.

7 Marked self to other compassion

The transcript is striking in that a compassionate stance is maintained in the retelling of the speaker's experiences. The rater has the sense that difficult experiences, particularly of an interpersonal nature have been fully incorporated and elaborated within a compassionate discourse.

9 Exceptional self to other compassion

This is not to be confused with ideas of perfection, striving or altruism. Rather what we observe within the transcript is a clarity of thought and mind where there is a sense of a integrated and elaborated compassionate understanding of self-other interactions, with painful experiences embedded in a strong sense of common humanity. As this stance is likely to require a significant understanding of one's own capacity for compassion. This score is unlikely to be assigned without a correspondingly high (e.g. 7 or above) score for self-compassion.

Other to Self Compassion Scale

-1 Anti-Compassionate

Discourse in the speaker's transcript reveals evidence of attitudes and beliefs indicating that others hold a harsh, cruel and actively non-compassionate stance towards the self. Self distress or suffering is likely to be denigrated by others.

1 Lacking in other to self compassion

There is an absence of compassionate examples of others compassion towards the self. responses towards others. There may be a tendency offer a superficial account of expressions

of compassion form others reflected in a tendency towards lack of memory, actively downplaying and / or minimising experiences. This does not necessarily mean that the transcript is especially cold or repudiating of compassionate responses. It may be that there is either (a) a lack of experience of compassion from others or (b) a clear effort to avoid discussions of experiences.

3 Minimal but present other to self compassion

We see the development of compassionate responses and understandings reflected in some efforts towards acknowledging others empathic understanding, forgiveness, acceptance and understanding of one's own experiences, particularly in periods of stress. It may be that these responses are implicit and there is little or no evidence of an explicitly compassionate stance reflecting clear unambiguous statements of compassion of others towards self, for example forgiveness and acceptance. These transcripts tend to show a brief, unexamined valuing of others' ability to provide support to oneself. Alternatively, it may be that compassion from others towards the self is expressed with some difficulty and that the stance is not embellished or maintained.

5 Emergent other to self compassion

On the whole the speaker maintains a compassionate stance of others towards the self reflected in expressions of understanding, warmth, forgiveness, empathy, sympathy and courage. This is reflected in a number of explicit and direct compassionate statements. However, It may be that the stance may not be maintained consistently in relation to all aspects of experience and the rater may note some significant areas of difficulty in maintaining a compassionate and non-judgemental attitude of others towards self.

7 Marked other to self compassion

The transcript is striking in that a compassionate stance is maintained in the retelling of the speaker's experiences of compassion from others to self. The rater has the sense that difficult experiences, particularly of an interpersonal nature have been fully incorporated and elaborated within a compassionate discourse.

9 Exceptional other to self compassion

This is not to be confused with ideas of perfection, striving or altruism. Rather what we observe within the transcript is a clarity of thought and mind where there is a sense of a

integrated and elaborated compassionate understanding of other to self interactions, with painful experiences embedded in a strong sense of common humanity. As this stance is likely to require a significant understanding of others' capacity for compassion.

Self to Self Compassion Scale

-1 Anti-Compassionate

The attitude towards oneself as evidenced in the transcript reveals a harsh, cruel and actively non-compassionate stance towards the self. Self may be regarded as superior, stronger and more deserving.

1 Lacking in self-compassion

There is an absence of compassionate responses towards oneself. There may be a tendency to normalise or be upbeat in relation to difficult experiences but evidence of a real sense of an attentional and / or behavioural orientation that is caring, warm, sensitive and empathising is absent. Alternatively, the transcript may contain evidence consistent with the individual taking a stance indicative of a high level of shame, criticism or self-attacking. The above considerations do not necessarily mean the transcript is especially cold or repudiating of compassionate responses.

3 Minimal but present self-compassion

We see the development of compassionate responses and understandings reflected in some efforts towards empathic understanding, forgiveness, acceptance and understanding of one's own experiences. It may be that these responses are implicit and there is little or no evidence of an explicitly compassionate stance reflecting clear unambiguous compassion-related statements, for example evidence of self-forgiveness or acceptance of one's own distress. These transcripts tend to show a valuing of one's ability to access support and relationships. Alternatively, it may be that this is expressed with greater difficulty towards the self and that the stance is not maintained. In this case self-critical responses may emerge or avoidant responses become re-established.

5 Emergent self-compassion

On the whole the speaker maintains a compassionate stance towards the self as reflected in expressions of understanding, warmth, self-forgiveness, acceptance, and courage. This is reflected in a number of explicit and direct compassionate statements. It may be that the stance may not be maintained consistently in relation to all aspects of experience. Alternatively or additionally, the rater may note some significant areas of difficulty in maintaining a compassionate and non-judgemental attitude towards the self and one's experiences, particularly when those experiences are difficult or distressing.

7 Marked self-compassion

The transcript is striking in that a compassionate stance is maintained in the retelling of the speaker's experiences. The rater has the sense that difficult experiences have been fully incorporated and elaborated within a compassionate discourse.

9 Exceptional self-compassion

This is not to be confused with ideas of perfection or striving. Rather what we observe within the transcript is a clarity of thought and mind where there is a sense of a integrated and elaborated compassionate understanding of the self. At this level the rater would anticipate that painful experiences will be presented, and reflected upon, while remaining embedded in a strong sense of common humanity.

Appendix 2.6: Participant Information Sheet

University of Glasgow
Institute of Health & Wellbeing

NHS Ayrshire & Arran

Attachment and Compassion in an Adult Population

Patient Information Sheet

Version 0.3, 22.11.17

Chief Investigator: Kathleen Singer, Trainee Clinical Psychologist

Research Supervisors: Prof Andrew Gumley, Dr Maureen Seils

Individuals who are invited for assessment by the Psychology Service in South Ayrshire's CMHT between November 2017 and May 2018 are given information regarding this study as they may be invited to take part when they attend for assessment.

Below is information about the study, which is entirely voluntary, and not connected to your assessment or the clinicians you will meet at your appointment.

What is the research about?

This study is designed to investigate compassion and people's experience of relationships, specifically how they are linked to recovery and wellbeing in people who have experienced mental health problems. This kind of research will help mental health services to understand the needs of people who have experienced mental health problems, and to develop new psychological therapies that aim to help people recover.

The study is being undertaken as part of the fulfilment 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, and difficulties with their relationships to take part in the study.

A member of the Psychology service who will assess you may suggest you might be interested in participating in this study.

What will you be asked to consent to?

Consenting to participate in this study means that you will be asked to complete a questionnaire called the PAM (Psychosis Attachment Measure). This questionnaire is about your experience of relationships.

Someone from the research team will contact you within two weeks following your completion of the questionnaire. Depending on your responses you may be invited to take part in the next stage of the study which involves meeting with a researcher to complete an interview. If you are not invited to this stage, then your participation in the study will end. You will always be given an opportunity to ask further questions about the study.

Your case notes may also be examined to obtain information about your age and the assessment completed by the mental health team.

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

In the first instance, you will be asked to complete a 16-item questionnaire (the PAM) about your experience of relationships at your assessment appointment. You may be invited to take part in the second stage of the research as detailed above.

The clinician you will be assessed by is not involved with the research and will not know if you have chosen to take part in the research or not.

What happens to the consent form?

To ensure anonymity and confidentiality, the consent form will be kept separately from the questionnaire in a locked filing cabinet within NHS Ayrshire and Arran premises.

What are the possible 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 these areas and potentially improve treatment for others in the future.

Is there a downside to taking part?

We do not expect you to be worried or distressed by your participation in the study. A lot of previous research studies have examined peoples' experiences of their relationships 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 the questionnaire, you can contact the researcher for more information. 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.

Do I have to take part?

No, it is up to you to decide whether to take part or not. This study is completely voluntary. You do not have to take part if you do not want to.

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 may 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 have you complete the questionnaire.

Will my information be kept confidential?

All the information you provide will be treated confidentially and the research questionnaires will only be identified by a code, not your name. The consent forms and study data will be stored on NHS Ayrshire and Arran premises and will be accessible to researchers who are directly involved with the research.

With your permission we will inform your GP 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 psychologist or GP). We will always make a reasonable attempt to discuss this with you beforehand and explain why we are concerned.

What will happen to the results of the research study?

The results will be compiled in a report completed as part of the fulfilment for an academic qualification (Doctorate in Clinical Psychology). They may later 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 the research?

The study is being undertaken as part of the fulfilment for an academic qualification and is organised by the Chief Investigator (Kathleen Singer, Trainee Clinical Psychologist), research supervisors, and 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

Contact for further information about the study

Kathleen Singer

Department of Health and Wellbeing

Admin Building, Gartnavel Royal Hospital

1055 Great Western Road

Glasgow

G12 0XH

What will happen if there is a problem or if I want to make a complaint?
If you have any concerns about the study or the way it is conducted or if you want to complain about any aspect of this study, please contact Prof. Tom McMillan, Mental Health and Wellbeing, Gartnavel Royal Hospital, 1st Floor, Admin Building, University of Glasgow, Glasgow G12 0XH, or the Research & Development Department, NHS Ayrshire and Arran on 01563 825850.

The normal NHS complaint mechanisms will also be available to you.

Thank you for reading this Participant Information Sheet

Appendix 2.7: Consent Forms

CONSENT FORM – Stage 1

Attachment and Compassion in an Adult Population

Name of Researcher: **Kathleen Singer**

1. I confirm that I understand the nature of the study proposed, having read and understood the information sheet (version and date _____) provided. I have had opportunity to ask questions, and am satisfied with the answers I received. ☐

2. I understand that my participation is voluntary, and that I am free to withdraw from the study at any time. Should I wish to with draw, I understand that I can do so without giving reason, and without my medical care or legal rights being *affected*. ☐

3. I agree to take part in the study. ☐

4. I agree that you may inform my general practitioner of my involvement in the study. ☐

5. I understand that my medical notes and data collected during the study may be looked at by individuals from the research team or from the health board where it is relevant to my taking part in this research. I give permission for these individuals to have access to this information. ☐

6. I would like to receive a copy of the study results. ☐

Participant Name	Date	Signature
……	… / … / ……	……
Researcher	Date	Signature
……	… / … / ……	……

1 copy for participant; 1 copy for researcher; 1 copy for GP notes

CONSENT FORM – Stage 2

Attachment and Compassion in an Adult Population

Name of Researcher: **Kathleen Singer**

1. I confirm that I understand the nature of the study proposed, having read and understood the information sheet (version and date _____) provided. I have had opportunity to ask questions, and am satisfied with the answers I received. ☐

2. I understand that my participation is voluntary, and that I am free to withdraw from the study at any time. Should I wish to withdraw, I understand that I can do so without giving reason, and without my medical care or legal rights being *affected*. ☐

3. I agree to take part in the study. ☐

4. I agree that you may inform my general practitioner of my involvement in the study. ☐

5. I understand that my medical notes and data collected during the study may be looked at by individuals from the research team or from the health board where it is relevant to my taking part in this research. I give permission for these individuals to have access to this information. ☐

6. I agree that you may audio tape and transcribe sessions as required. ☐

7. I agree that fully annonymised quotations may be used in publications and other materials arising from the study. ☐

8. I would like to receive a copy of the study results. ☐

Participant Name	Date	Signature
……	… / … / ……	……
Researcher	Date	Signature

…… … / … / …… ……

1 copy for participant; 1 copy for researcher; 1 copy for GP notes