Resilience, Attachment and Personality Disorders

by

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ABBREVIATIONS

APA	American Psychiatric Association
BPS	British Psychological Society
CAMHS	Children and Adolescents Mental Health Services
CDSR	Cochrane Database of Systematic Reviews
CD-RISC	The Connor-Davidson Resilience Scale
CRD	The Centre for Reviews and Dissemination
DOH	Department of Health
DSM	Diagnostic and Statistical Manual of Mental Disorders
NICE	The National Institute for Health and Care Excellence
PD	Personality Disorder
RQ	The Relationships Questionnaire
SA-SAPAS	Self-administered - Standardised Assessment of Personality - Abbreviated Scale

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DECLARATION

This thesis has been written as part of the Doctorate in Clinical Psychology at the Universities of Coventry and Warwick. The thesis has not been submitted for a degree at any other university. This thesis is entirely my own work under the supervision of Dr Lesley Pearson, Dr Magdalena Marczak, Dr Paul Patterson and Dr Ian Hume.

SUMMARY

The promotion and development of resilience in children and young people has become increasingly the focus of many preventative and treatment interventions. This is informed by evidence that suggest that a high proportion of mental health difficulties start by adolescence and can have enduring consequences later in life. One of the psychological presentations that cause significant difficulties is personality disorder. Attachment theory has been connected to both resilience and personality disorders, however their interaction has not yet been studied. This thesis aims to bring together these concepts in an attempt to contribute to the evidence of developmental pathways to personality disorders and to resilience.

Chapter one presents a systematic review of the association between attachment and personality disorders in children and adolescents. The findings of the review support the literature that has previously documented this association and confirms that attachment theory is a meaningful framework for the understanding of personality disorders in children and young people. Furthermore, it includes additional factors that may interact within this relationship. This has clinical and research implications that are discussed along with the limitations of the review.

Chapter two contains an empirical paper that focuses on the interaction of resilience with attachment and personality disorder. Findings from this study

support existing evidence that additional factors help explain the relationship between attachment and the development of personality disorders. Thus the empirical paper enhances the findings from the literature review.

Chapter three offers an account of the author's experiences of research, including reflections on personality constructs. It encompasses these reflections within the wider experiences of clinical training to finally consider these topics in the wider context of mental health services.

CHAPTER I: LITERATURE REVIEW

A Systematic Review of the Relationship between Attachment and Personality Disorders in Childhood and Adolescence

Prepared for submission to Journal of Personality Disorders (please refer to Appendix 1 for instructions for authors). Amendments will be made from the method section to submit for publication.

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1. ABSTRACT

Aims: There is evidence to suggest that clinical presentations that are referred to as personality disorders may have significant consequences for the development of young people. Attachment theory has been proposed as a meaningful framework for the understanding of the development of these clinical presentations. However the existing literature has mainly focused on adult populations. The aim of this paper is to integrate the findings from studies that investigate the association between attachment and personality disorders in childhood and adolescence.

Method: A systematic search of relevant articles was conducted in the electronic databases PsycInfo, Medline, Cinahl and Web of Science.

Results: Eleven studies were included in this review, all of which employed a quantitative methodology. Three studies included all categories of personality disorders and eight studies focused only on borderline personality disorder. Five studies explored exclusively a direct relationship between attachment and personality disorders whilst six studies also included additional variables. The reviewed literature suggests that there is an association between these two constructs and that additional constructs help explain this relationship.

Conclusion: Attachment theory can be a valid framework for understanding personality disorders in childhood and adolescence. Limitations of the study and future recommendations for research and practice are discussed.

Keywords*: attachment, personality disorders, personality development, children, adolescents*

2. INTRODUCTION

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) refers to personality disorders as patterns of thinking and feeling about oneself and others that significantly affect individual functioning (American Psychiatric Association [APA], 2013a). Furthermore, they are described as pervasive patterns which begin by early adulthood and present in a variety of contexts (APA, 2013a). The construct of personality disorder in adolescence[1] has received increasing attention within literature and research but has also aroused controversy (Chanen & McCutcheon, 2008; Adshead, Brodrick, Preston, & Deshpande, 2012). Adshead et al. (2012) have summarised one side of this conflict in that personality disorder diagnoses before adulthood[2] may be inappropriate due to personality not being fully developed and the potential stigma that this label may cause. However, it has been argued that a high proportion of adolescents with psychological difficulties meet criteria for a diagnosis of personality disorder (Chanen et al., 2004), and that personality disorder pathways may begin in childhood (Shiner, 2007).

[1] For the purpose of this review, adolescence refers to the stage between 12-18 years old. Childhood refers to 3-11 years old (AAAS, 2016).
[2] Adulthood is identified as starting at age 18 throughout this review.

The DSM-5 classification (APA, 2013a) is predominantly used to identify personality disorders and provides their categorical organisation. However, the high rate of comorbidity among personality disorders in adolescence (Cohen, Crawford, Johnson, & Kasen, 2005) as well as between personality disorders and other mental health difficulties (Shiner, 2009) suggests that personality disorders may not be categorical units with distinct aetiologies. Moreover, similar psychological processes and personality dimensions may underlie psychological difficulties (Clark, 2005, 2007) and therefore it may be more useful to understand them as continuous dimensions in which personality difficulties are severe manifestations (Shiner, 2009). For this reason, dimensional or multimodal approaches to personality disorder classifications have been proposed (Shiner, 2009). However, for the purpose of this review, a categorical classification of personality disorders will be used which is based on the fourth edition of the DSM. This is for consistency with most of the reviewed studies in this paper. Of note, the DSM-IV and DSM-5 share the same classification of personality disorders. A description of this classification is presented in Table 1 and includes correspondence to DSM clusters of categories.

2.1 Prevalence and Stability of Personality Disorders in Childhood and Adolescence

The diversity of methodologies employed by epidemiological studies pose constraints for the interpretation of their results. Although different studies

report different prevalence rates of personality disorders in community and clinical populations, they are helpful in providing a sense of the incidence of these disorders. For example, some authors reported that 7% to 15% adults in the community present with a type of personality disorder (Torgersen, Kringlen, & Cramer, 2001), and this was confirmed by a study that reported a prevalence rate of 12.7% to 14.6% (Johnson, Cohen, Kasen, Skodol, & Oldham, 2008). In outpatient populations, an incidence of 31.4% for at least one specified personality disorder and of 45.5% for non-specified personality disorder seems to indicate that personality disorders are among the most frequent clinical presentations (Zimmerman, Rothschild, & Chelminski, 2005). Moreover, these presentations can influence the course and treatment of other mental health difficulties that are more commonly presented by patients as their primary concern (Zimmerman et al., 2005). Similarly, 40% of adult patients in secondary care were reported to present with at least one personality disorder (Newton-Howes et al., 2009). In the largest survey of psychiatric morbidity in prisoners in England and Wales the prevalence of personality disorder amongst sentenced male prisoners was 64% (Moran, 2005).

Similar to the evidence presented above, between 6% and 31% of children and adolescents in community and primary care samples have been estimated to present with personality disorders (Johnson, Bromley, Bornstein, & Sneed, 2006), in contrast to approximately 61% in inpatient settings (Levy et al., 1999). Overall,

personality disorders seem to be as prevalent in adolescence as in adulthood (Shiner, 2009).

In terms of stability, there is more development in personality in childhood and early adolescence than in later adolescence (Klimstra, Hale, Raaijmakers, Branje, & Meeus, 2009) and thus, personality disorder characteristics appear to be highest in early adolescence (Johnson, Bromley et al., 2006). In some cases, personality disorder is evident by mid-adolescence whereas in other cases it does not become evident until early adulthood (Skodol, Johnson, Cohen, Sneed, & Crawford, 2007). Shiner (2009) reported that personality disorder is moderately stable from adolescence to young adulthood, similar to that observed in adult populations.

Table 1: Description of Personality Disorders (DSM-IV) and correspondence to Clusters (APA, 2000)

Personality Disorder	**Characteristic Criteria**	**Clusters**
Paranoid	Distrust and suspiciousness of others such that their motives are interpreted as malevolent	A
Schizoid	Detachment from social relationships and a restricted range of emotions in interpersonal settings	A
Schizotypal	Social and interpersonal deficits marked by acute discomfort with, and reduced capacity for, close relationships as well as by cognitive or perceptual distortions and eccentricities of behaviour	A
Antisocial	Disregard for and violation of the rights of others	B
Borderline	Instability of interpersonal relationships, self- image, and affects, and marked impulsivity	B
Histrionic	Excessive emotionality and attention seeking	B
Narcissistic	Grandiosity (in fantasy or behaviour), need for admiration, and lack of empathy	B
Avoidant	Social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation	C
Dependent	Excessive need to be taken care of that leads to submissive and clinging behaviour and fears of separation	C
Obsessive-Compulsive	Preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency	C

Cluster A: characterised by unusual, unconventional behaviour
Cluster B: characterised by intense, seemingly unpredictable emotional responses
Cluster C: characterised by anxious and fearful behaviour

2.2 Clinical Relevance of the Study of Personality Disorders in Adolescence

It has been argued that personality disorders in adolescence predict later relationship difficulties, lower social engagement and poorer educational and work achievements (Shiner, 2009). In addition, it has been reported that personality disorders in adolescence increase the risk of violence and law breaking (Johnson et al., 2000), suicidal ideation or attempt (Johnson et al., 1999) and high-risk sexual behaviours (Lavan & Johnson, 2002). Lastly, there is a lesser focus on treatment of personality disorders in adolescents than there is on other mental health difficulties (Crawford et al., 2008), perhaps due to the controversies surrounding personality disorders (Adshead, 2012), as suggested in the introduction. However, the potential consequences that both these difficulties may have later in adulthood are comparable and therefore should be given equal consideration (Crawford et al., 2008).

There is strong evidence suggesting that childhood abuse and neglect pose a high risk for the development of personality disorders (Johnson, Bromley et al., 2006). Moreover, environments that are unresponsive, invalidating or characterised by low affection have also been identified as predictive of personality disorders (Johnson, Cohen, Chen, Kasen, & Brook, 2006). Attachment theory has provided a theoretical framework for the explanation of the impact that the caregiving environment has on personality development.

2.3 Attachment Theory Conceptual Framework

Attachment theory has been relevant in providing a developmental explanation of how the caregiving environment can influence the development of adaptive and maladaptive personality patterns. Bowlby (1969, 1973, 1980) proposed that children develop cognitive and affective mental representations based on their caregiving environment. These representations, described as internal working models, reflect the *self* as more or less lovable and *others* as more or less reliable and loving. Hazan and Shaver (1987), and then Bartholomew (1990) proposed that a negative model of self manifests through anxiety whereas a negative model of others leads to avoidance. Individuals with a diagnosis of personality disorders tend to have more negative views of both themselves and others as well as more negative cognitions (Skodol et al., 2005). These mental representations of self and others are consistently accompanied by particular sets of emotions and behaviours that are activated by such representations (Greenberg, Elliot, & Lietaer, 2003). This may explain the negative and heightened emotional, cognitive and behavioural patterns often seen in individuals presenting with personality disorders.

According to attachment theory and research within this field, children begin to develop patterns of security versus insecurity in the context of their earliest close relationships, typically with parents (Mikulincer & Shaver, 2007). It is in the

context of these early relationships that children develop mental representations of who they are in relation to others and of the availability and responsiveness of others in times of stress and need (Mikulincer & Shaver, 2007).

Various models have been developed to classify attachment into patterns (see Table 2). The first classifications were based on observations of infant behaviour towards their caregiver in specific situations (Ainsworth, Blehar, Waters & Wall, 1978; Main & Solomon, 1986). Following this, a new study of attachment styles progressed from a behavioural to a representational approach and investigated the mental representations of children and their parents for each style (Main, Kaplan & Cassidy, 1985). These children had previously taken part in the research on infant classifications and this allowed for attachment styles to be mapped between children, both at infant to older child ages, and their parents. Hazan and Shaver (1987) applied attachment theory to adult romantic relationships and Bartholomew and Horowitz (1991) to adults in general. This classification has been described as an influential contribution to the understanding of adult attachment that shaped theory and measurement of attachment and continues to be used (Mikulincer & Shaver, 2008). Additionally, it includes four attachment patterns, as opposed to three in other classifications, and extends to adult relationships in general. For these reasons, and for the purpose of clarity and consistency in this review, this classification will be used. The four categories included in this classification are secure, preoccupied, dismissing and fearful. The

studies reviewed in this paper, however, employed different classifications that can be seen in Table 5.

2.4 Attachment and Personality Disorders Empirical Evidence

A review of studies of clinical samples that employed self-report and interview-based methods of assessment reported connections between attachment styles and personality disorders (Levy, Johnson, Clouthier, Scala, & Temes, 2015). Specifically, preoccupied attachment was associated with histrionic, dependent and avoidant personality disorders whilst dismissing attachment was linked to paranoid, narcissistic, antisocial and schizoid personality disorders. Lastly, fearful attachment was related to schizotypal, paranoid, avoidant, borderline, narcissistic and obsessive-compulsive personality disorders. These findings confirmed a meta-analysis review of attachment distributions in clinical samples (Bakermans-Kranenburg & van Ijzendoorn, 2009).

Table 2: Main Attachment Classifications and Description of Attachment Styles

AUTHOR YEAR	TYPE OF CLASSIFICATION DESCRIPTION OF THE AUTHOR/S' WORK	ATTACHMENT CATEGORIES AND CHARACTERISTICS			
Ainsworth, Blehar, Waters & Wall 1978	Behavioural classification applied to infants. Contributed to develop attachment theory based on behavioural infant observation in relation to situations of separation and reunion using the Strange Situation Protocol. Three main attachment categories of attachment were described, and a further eight sub-patterns.	*Secure* Infants are able to use caregivers as a secure base for exploration. Separation intensifies attachment behaviour, diminishes exploration and causes distress. Upon reunion, they seek proximity and interaction with caregivers with a clear preference over strangers.	*Insecure-Ambivalent/Resistant* Infants tend to seek contact and demonstrate anxiety even before separation and are weary of situation and of stranger. Separation causes intense distress and infants are ambivalent about contact with caregiver upon reunion, seek contact and express anger or resist interaction.	*Insecure-Avoidant* Infants engage with toys but are unlikely to show affective sharing or behaviours towards caregiver. They are unlikely to be distressed upon separation, treat stranger and caregiver similarly and ignore or avoid caregiver upon reunion.	
Main & Solomon 1986	Behavioural classification applied to infants. Description of a fourth category of attachment that corresponds to a group of infants who could not be classified according to Ainsworth's model.				*Insecure-Disorganized/Disoriented* Conflicted, contradictory or disoriented behaviours with no readily observable goal, intention or explanation. Indicate an inability to maintain one coherent attachment strategy in the face of distress. May be hostile or inappropriately caring.

AUTHOR YEAR	TYPE OF CLASSIFICATION DESCRIPTION OF THE AUTHOR/S' WORK	ATTACHMENT CATEGORIES AND CHARACTERISTICS			
Main, Kaplan & Cassidy 1985	Representational classification applied to children and adults. First model based on mental representation or 'internal working models' that influence feelings, behaviour, patterns of language, and mind structures (attention, memory, cognition). Described four attachment patterns of parents.	*Secure* Individuals value attachment relationships and regard attachment-related experiences as influential to personality. View of own parents is objective, coherent and consistent although flexible. Readiness to recall and ease in discussing attachment suggesting prior reflection.	*Insecure-Ambivalent* Individuals appear confused about attachment relationships and lack objectivity to move beyond their preoccupation.	*Insecure-Avoidant* Individuals either dismiss the importance of attachment or the depth of influence that attachment has on themselves. The impact of negative experiences of attachment is negated through normalisation, idealisation or poor childhood memory.	*Insecure-Disorganized/Disoriented* Individuals experience disorganisation and disorientation when describing attachment events. Irrational thought processes about trauma and loss, unfounded fear and guilt and disbelief that distressing events occurred.
Hazan & Shaver 1987	First application of the concept of attachment to adult romantic relationships. Included three categories of attachment.	*Secure* Love experiences are characterised by trust, friendship and positive emotions. There is a belief that love is durable, others are trustworthy and self is likeable. Relationships tend to last longer than in the other two styles.	*Anxious/Ambivalent* Love experiences are characterised by preoccupation, desire for reciprocation and union, emotional changes and extreme sexual attraction and jealousy. Love is found frequently and easily but it is difficult to find deeper love.	*Avoidant* Love experiences are characterised by fear of intimacy, lack of trust, emotional changes and jealousy. There is doubt that love is possible or durable and a belief that a love partner is not needed in order to be happy.	

AUTHOR YEAR	TYPE OF CLASSIFICATION DESCRIPTION OF THE AUTHOR/S' WORK	ATTACHMENT CATEGORIES AND CHARACTERISTICS			
Bartholomew & Horowitz 1991	Proposed a new model of attachment styles in adulthood. Internal working models of self and others were used to define four attachment patterns. The authors described correspondence between their attachment patterns and those of previous models.	*Secure* This pattern indicates a sense of worthiness and an expectation that others are generally accepting and responsive.	*Preoccupied* Indicates a sense of unworthiness combined with a positive evaluation of others. Individuals are highly dependent on others to maintain positive self-regard and they attempt to achieve this through a controlling and dominant interpersonal style.	*Dismissing (dismissive-avoidant)* Indicates a sense of worthiness combined with a negative disposition toward others. Individuals protect themselves from disappointment by avoiding close relationships and maintaining a sense of independence and invulnerability.	*Fearful (fearful-avoidant)* Indicates a sense of unworthiness combined with an expectation that others will be untrustworthy and rejecting. Individuals avoid close relationships to protect themselves against anticipated rejection.

Levy et al. (2015) highlighted the scarce empirical evidence available in relation to attachment and personality disorders. The author added that despite the seemingly strong associations between attachment insecurity and personality disorders in general, there is limited research of the associations regarding specific personality disorders, with the exception of borderline personality disorder. Borderline personality disorder has been associated with attachment anxiety in numerous studies (for a review see Levy, Meehan, Weber, Reynoso, & Clarkin, 2005), whereas its association with attachment avoidance has been less consistent and in some cases not found (Meyer, Pilkonis, & Beevers, 2004). Moreover, other research has shown association between attachment avoidance and borderline personality disorder when anxiety was also elevated (Levy et al., 2005) suggesting that fearful attachment may contribute to borderline personality disorder.

2.5 Extending on the Attachment Theory Framework

It has been proposed that although attachment theory provides a useful model in understanding personality development and pathology, it is insufficient to explain the variability and heterogeneity found in personality disorder presentations (Crawford et al., 2006; Nakash-Eisikovits, Dutra, & Westen, 2002). Most research has focused on borderline personality disorder and the role of additional constructs (Levy et al., 2015). The relationship between preoccupied attachment and borderline personality disorder has been shown to be mediated by anger, irritability and social dysfunction (Critchfield, Levy, Clarkin, & Kernberg,

2008; Morse et al., 2009) whereas self-harm mediated the pathway between dismissing attachment and borderline personality (Critchfield et al., 2008). The connection between fearful attachment and borderline personality disorder has been partly explained by reactive aggression (Critchfield et al, 2008). Another model has proposed that the combination of disruption of the attachment relationship with later traumatic experiences interacts with neurobiological development and leads to instability of mentalisation[3] (Fonagy & Bateman, 2008). Furthermore, Linehan's (1993) biosocial theory proposed emotional dysregulation as central to borderline personality disorder, where emotion is broadly defined and includes related cognitive, biological and behavioural processes. The findings above suggest that attachment styles may contribute significantly to the development of personality disorders although the developmental pathways are less clear (Levy et al., 2015).

2.6 Rationale for Current Review

The literature presented above raises some questions. The first question concerns the relevance of studying and diagnosing personality disorders in childhood and adolescence. The ethical, clinical and empirical considerations to

[3] Mentalisation has been described as the capacity to make sense of ourselves and others in terms of mental states (Fonagy & Bateman, 2008)

this ongoing debate exceed the scope of this review and were not regarded as an explicit aim of the current review, although this will be briefly considered in the discussion section. However, the aforementioned serious implications that these clinical presentations may have on the development of young people and their adjustment into adulthood seem to justify the need for a better understanding of the way in which they may develop.

A second question relates to the value of attachment theory in explaining developmental pathways of personality disorders. Although there is a rich literature suggesting that attachment is related to personality pathology in adolescence, previous studies have reviewed this from a theoretical rather than empirical perspective (Westen & Chang, 2000; Vizard, 2008) or have not employed systematic methodologies (Steele, Bate, Nikitiades, & Buhl-Nielsen, 2015). To date, no systematic review has been conducted on the relationship between attachment and personality disorders in children and young people. Moreover, research has tended to focus on borderline and antisocial personality disorders, perhaps due to the higher social disruption associated with these presentations (Adshead et al., 2012). Nonetheless, it is also necessary to understand the developmental pathways of other presentations because of their possible severe implications on wellbeing and functioning.

2.7 Aims

The current systematic review aims to provide an integrative and critical account of the existing research on the relationship between attachment and personality disorders in childhood and adolescence.

In particular, this review aims to answer the following question:

- Is there a relationship between attachment styles and personality disorders in childhood and adolescence?

3. METHOD

3.1 Search Strategy

Search terms were selected based on their relevance to the question of the literature review. Synonyms were explored in preliminary database searches and selected to include relevant variations of the terms (Table 3). In regards to attachment, other terms explored were attachment theory or attachments. However these terms did not identify additional records and therefore were not selected in the final search terms. In regards to personality disorder, other terms explored were specific personality disorders, personality types or personality traits. These terms, however, demonstrated no relevance for the current review as studies of specific personality disorders already emerged when searching for the initial term personality disorder. On another hand, studies of personality

traits were not relevant for the current review as this construct differs from that of personality disorder. Lastly, terms referring to the same age as the term adolescence were included, such as young person and young people.

3.2 Data Sources

To ensure that the material in this review was original and had not been previously published a search was conducted in Cochrane Database of Systematic Reviews (CDSR) and The Centre for Reviews and Dissemination (CRD). Following this, searches were completed in PsycInfo, MedLine and Cinahl and Web of Science, electronic databases in the fields of psychology, behavioural and social science, biomedical science and health, during February and March 2016.

3.3 Eligibility Criteria

Eligibility criteria were selected to decide which studies to include in the current review (see Table 4). Studies that were peer-reviewed were considered for inclusion as well as those that employed quantitative, qualitative or mixed methodologies. Non-empirical studies or case studies were excluded. It was required that studies considered for inclusion measured constructs relevant to this review, i.e. attachment and personality disorders as specified in DSM-IV. It was also required that they reported on the relationship, or absence of, between the two constructs.

Table 3: Systematic Literature Review Search Terms

Construct	Term	Database	Location of term
Attachment	Attachment	PsycInfo	Title, Abstract
		MedLine	Title, Abstract
		Cinahl	Title, Abstract
		Web of Science	Title, Topic
Personality Disorder	"Personality disorder*"	PsycInfo	Title, Abstract
		MedLine	Title, Abstract
		Cinahl	Title, Abstract
		Web of Science	Title, Topic
Child and Adolescence	Child* OR	PsycInfo	Title, Abstract
	Adolescen* OR	MedLine	Title, Abstract
	"Young person*" OR	Cinahl	Title, Abstract
	"Young people"	Web of Science	Title, Topic

*Note: The terms in each construct were combined using the Boolean operator 'AND' and the terms corresponding to the construct Child and Adolescence were combined using 'OR'. Quotation marks "" were used to allow for identification of specific phrases. The symbol * was used for truncation to search for alternative endings to relevant words.*

Lastly, it was required that participants of the studies for inclusion were children and/or adolescents. This criterion required careful consideration as studies describing their sample as adolescent covered a wide age range. For example, there were studies that described their sample as adolescent however participants were all over 18 and/or the higher age range went up to 30 years old

or more. In addition to this, the age information available in most studies was limited to range, mean and standard deviation. Taking these issues into consideration, it was initially concluded that investigation of the aforementioned constructs had to take place before and including the age of 18. This meant that the higher end of the age range of participants were below or up to 18. However, there was one study (Rosenstein & Horowitz, 1996) that described their sample as adolescents with an age range of 13.08 - 19.75 years, with mean age of 16.36 years. This study was considered very relevant for the current review as it was one of few studies that included all categories of personality disorders and not only borderline personality disorder. Although the mean age does not provide information on the number of participants that were above 18 years old, it was accepted as inclusion criteria that the mean was under 18 and the sample described as adolescents for those studies where the age ranged from under to over 18. This criterion only applied to the study specified above. However, this poses a limitation for the current review, which is discussed further in the limitations of the study.

3.4 Systematic Selection of Studies

A total of 365 studies were generated from the search of terms across the aforementioned databases. A total of 45 duplicates were removed. Of the remaining studies, titles and abstracts were screened for relevance to this review.

302 studies were discarded leaving a total of 18 potential articles for inclusion. The full text of these articles was reviewed against inclusion and exclusion criteria, which generated 11 studies suitable for inclusion. The reference lists of these studies were screened for relevant articles, which revealed a further 34 potential studies for inclusion. From these additional records, 15 articles were duplicates and 19 were not relevant for this review. The process of selection of studies was based on the PRISMA recommendations (Moher, Liberati, Tetzlaff & Altman, 2009). This process is illustrated in Figure 1.

3.5 Quality Assessment

It has been recommended that a formal evaluation of the methodological quality of studies is employed as part of conducting a systematic review (Sanderson, Tatt & Higgins, 2007). This section includes a description of the framework for quality assessment used in this review.

Table 4: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Studies were considered for inclusion if they were:	Studies were excluded if they were:
i. Peer-reviewed articles ii. Quantitative, qualitative or mixed methods iii. Studies that measured the constructs attachment and DSM-IV personality disorders iv. Studies that reported on the association, or absence of, attachment and personality disorder v. Studies that investigated the aforementioned constructs up to the age of 18 years[4]: • Age range below or up to 18 years OR • Mean age below 18 with a description of the sample as 'adolescent' (in the event that the age range goes over 18)	i. Non-empirical studies ii. Case studies iii. Articles published in languages other than English

[4] The age for inclusion criteria of studies was selected according to practices in Children and Adolescents Mental Health Services (CAMHS) in which young people transition to adult services when they reach 18. Despite local variations, this has been the predominant practice until now (Parker, Clements, Harbour, & Honigmann, 2016).

3.5.1 Quality Assessment Framework

This systematic review included only quantitative studies. To assess the quality of these studies, the framework developed by Caldwell, Henshaw and Taylor (2011) was employed. This framework was developed for critiquing health-related research. Based on their review of previous critique frameworks, they proposed a series of questions to be addressed when critiquing research and guidelines on how to answer these questions.

The quality assessment included 17 items, from which 11 are generic to quantitative and qualitative methodologies and 6 are specific to quantitative studies. The items were rated according to the extent to which the studies met the items criteria: 0 = 'criteria not met' or 'information not provided', 1 = 'criteria partially met' and 2 = 'criteria met'. A total percentage was calculated for each study to allow for comparison between them. This percentage is included in Table 5, which presents a description of characteristics of the studies included in this review.

The studies included in this review scored between 69% and 86% in the quality assessment. In particular, one study scored 69%, three studies scored 70-80% and six studies scored over 80% (see Appendix 2 for the results of the quality assessment).

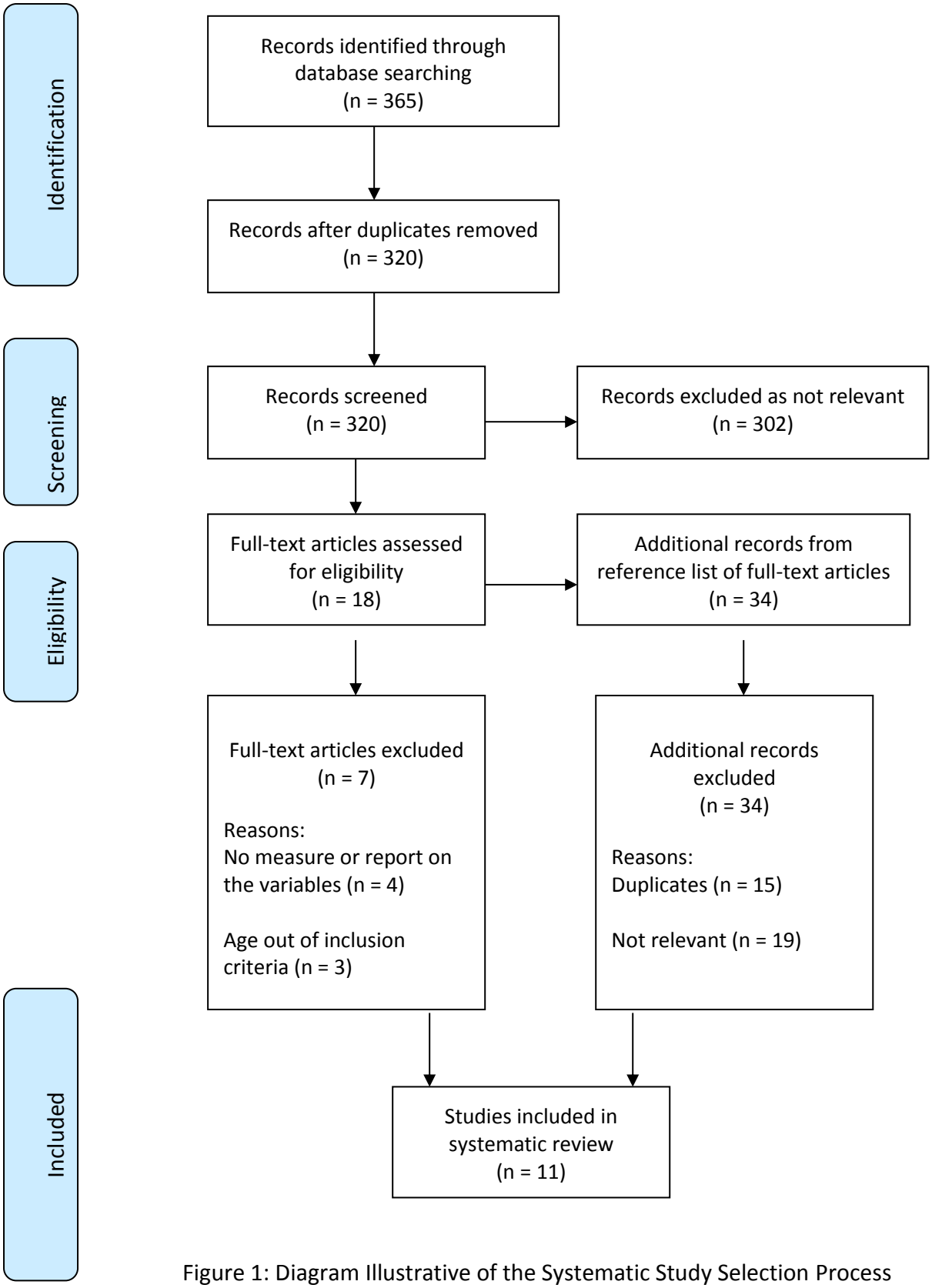

Figure 1: Diagram Illustrative of the Systematic Study Selection Process

(Moher, Liberati, Tetzlaff & Altman, 2009)

4. RESULTS

4.1 Overview of Reviewed Studies

A summary of the characteristics and main findings of the eleven studies included in this review is presented in table 5. This table includes the quality assessment ratings. For the purpose of this review, only the findings associated with the aims will be discussed. The results section will provide a descriptive and critical overview of the characteristics of the studies followed by a synthesis of the findings.

4.2 Critical Appraisal of Study Characteristics

4.2.1 Design

All eleven studies reviewed employed a quantitative methodology. Although this methodology is appropriate for the nature of the studies aims, the employment of mixed and qualitative methods might have provided further understanding about the experiences of participants and contributed to the knowledge base from a different approach. Nine studies (Cicchetti et al., 2014; Deborde et al., 2012; Fossati et al., 2011, 2014; Kim et al., 2014; Nakash-Eisikovits et al., 2002; Ramos et al., 2014; Rosenstein & Horowitz, 1996; Sharp et al., 2015) employed a cross-sectional design and only two studies (Crawford et al., 2006; 2009)

Table 5: Characteristics of the Studies Included in the Review

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Moderation of maltreatment effects on childhood borderline personality symptoms by gender and oxytocin receptor and FK506 binding protein 5 gene Cicchetti, Rogosch, Hecht, Crick & Hetzel, 2014. USA	To investigate gene, environment and gender interaction effects in predicting child borderline personality disorder symptomatology in children controlling for maltreatment	Cross-sectional	Anxious[5] Avoidant	Not stated	N=1051 Age 8-12 (mean age=10.37) Nonclinical	1. Relationship Stance Questionnaire (RSQ) 2. Borderline Personality Features Scale Children Data from: participants, their peers and counsellor	Children in the higher-level symptom group reported higher preoccupied attachment towards their mothers.	75%

[5] Correspondence of attachment according to the classification used in this review (see Table 2):

- Anxious attachment corresponds to preoccupied attachment
- Avoidant attachment corresponds to dismissing attachment

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Early maternal separation and the trajectory of borderline personality disorder symptoms Crawford, Cohen, Chen, Anglin & Ehrensaft, 2009. USA	To investigate the impact of separations from mother in early years on borderline personality disorder	Longitudinal	Anxious Avoidant	DSM-IV	Data collected from the Children in the Community (CIC) study: N=756 in 1983 Age range=11.10-16.3 (mean age=13.70) N=746 in 1885-86 Age range=13.30-18.90 (mean age=16.10)	1. Personality Diagnostic Questionnaire – BPD scale 2. CIC Attachment Scale Data from: participants and their mothers	Attachment anxiety was associated with borderline personality disorder. The risk associated with early separation was independent of attachment anxiety and avoidance.	69%
Self-reported attachment, interpersonal aggression, and personality disorder in a prospective community sample of adolescents and adults Crawford, Shaver, Cohen, Pilkonis, Gillath, & Kasen, 2006. USA	1. To explore insecure attachment and interpersonal aggression in personality disorder clusters 2.To develop and assess the validity of a measure of attachment	Longitudinal	Anxious Avoidant	DSM-IV	Data collected from the Children in the Community (CIC) study: N=729 Age range=13.20-18.80 (mean age=16)	1. Personality disorders: own measure according to DSM-IV, items from the Personality Diagnostic Questionnaire (PDQ) and the Structured Clinical Interview for Personality Disorders (SCID-II) 2. Attachment: own scales analogous to Experiences in Close Relationships Inventory, self-descriptive items representative of attachment styles. Data from: participants and their mothers	Anxious attachment was mainly associated with clusters B and C symptoms. Cluster A was mainly associated with avoidant attachment and with interpersonal aggression.	78%

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Alexithymia as a mediator between attachment and the development of Borderline Personality Disorder in Adolescence Deborde, Miljkovitch, Roy, Dugre-Le Bigre, Pham-Scottez, Speranza & Corcos, 2012. France, Belgium and Switzerland	To test a model of mediation	Cross-sectional	Secure Preoccupied Dismissing Fearful	DSM-IV	N=105 Age 13-18 Including a sample of borderline personality disorder and a matched control	1. Structured Interview for *DSM-IV* Personality Disorders 2. Relationship Styles Questionnaire 3. Toronto Alexithymia Scale Attachment data from: participants Personality disorder data from: psychiatrist	The role of preoccupied and fearful attachments and negative model of self in the development of borderline personality disorder is mediated by alexithymia.	86%

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Does mindfulness mediate the association between attachment dimensions and Borderline Personality Disorder features? A study of Italian non-clinical adolescents Fossati, Feeney, Maffei & Borroni, 2011 Italy	To assess mediation of mindfulness between attachment and features of borderline personality disorder	Cross-sectional	*-Confidence*[6] *in Self and Others* *-Discomfort with Closeness* *-Relationships as Secondary* *Need for Approval* *Preoccupation with Relationships*	DSM-IV	N=501 Age range=16.34-18.10 (mean age=17.22) High-school students	1. Personality Diagnostic Questionnaire-4 + (PDQ-4 +) 2. Attachment Style Questionnaire (ASQ) Data from: participants	Attachment insecurity was associated with borderline personality features. Mindfulness mediated some of those associations.	81%

[6] Correspondence of attachment scales used in Fossati et al., (2011, 2014) with attachment classification employed in this review:

- *Confidence in Self and Others* (secure), *Discomfort with Closeness* (dismissing), *Relationships as Secondary* (dismissing), *Need for Approval* (fearful and preoccupied) and *Preoccupation with Relationships* (preoccupied)

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Thinking about feelings: Affective State Mentalization, Attachment Styles, and Borderline Personality Disorder Features Among Italian Nonclinical Adolescents Fossati, Feeney, Maffei & Borroni, 2014 Italy	1. To test the hypothesis that people with BPD have metalisation deficits. 2. To test whether these measures of mental functions were correlated with insecure attachment styles	Quantitative Cross-sectional	*-Confidence in Self and Others* *-Discomfort with Closeness* *-Relationships as Secondary* *Need for Approval* *Preoccupation with Relationships*	Correlated to DSM-III-R	N=89 Age range=14.99-18.41 (mean age=16.70) Non clinical adolescents	1. Borderline Personality Inventory (BPI) 2. Reading the Mind in the Eyes Test Revised Version (RET) 3. Difficulties in Emotion Regulation Scale (DERS) 4. Attachment Style Questionnaire (ASQ) Data from: participants	Findings seem to support the hypothesis that BPD features are associated with difficulties in mental representation of affective states, as well as with insecure attachment styles, and that a substantial amount of this association is mediated by attachment disturbances.	83%
The Protective Role of Attachment Security for Adolescent Borderline Personality Disorder Features via Enhanced Positive Emotion Regulation Strategies	1. To test mediating effect of emotion dysregulation in the link between attachment insecurity and borderline personality features 2. To further test moderating effects of	Cross-sectional	Attachment security	Not stated	N=228 Age range=12-17 (mean age=15.43) Clinical sample	1. Security Scale (SS) 2. Cognitive Emotion Regulation Questionnaire (CERQ) 3. Personality Assessment Inventory-Adolescent, Borderline Features scale (PAI-A BOR) Data from: participants	Attachment insecurity was associated with borderline personality features through its relation with emotion dysregulation.	81%

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
Kim, Sharp & Carbone, 2014 USA	emotion regulation							
Relationship between attachment patterns and personality pathology in adolescents Nakash-Eisikovits, Dutra & Westen, 2002 USA	To examine the relation between attachment and personality pathology	Cross-sectional	Secure Anxious Avoidant Fearful	DSM-IV	N=294 Age 14-18	1. Child Behaviour Checklist (CBCL)– clinicians version 2. Relationship Questionnaire (RQ) 3. Clinician report of the Relationship Questionnaire 4. Clinical Data Form and several measures of personality pathology Data from: clinicians	Fearful attachment was associated with personality pathology. Anxious attachment tended to be associated with withdrawal, internalization, and introversion. Avoidant attachment was not associated with any single form of personality pathology.	86%
Discrete subgroups of adolescents diagnosed with BPD: a latent class analysis of personality features Ramos, Canta, de Castro & Leal,	To identify subgroups of borderline personality disorder features characterising	Cross-sectional	Secure Anxious Avoidant	DSM-IV-TR	N=60 Age range 15-18 (mean=15.90) Clinical	1. Childhood Interview for DSM-IV BPD 2. Millon Adolescent Clinical Inventory (MACI) 3. Depressive Experiences Questionnaires (DEQ) 4. Inventory of Attachment in Childhood and Adolescence (IACA) Data from: participants	Two subgroups of borderline personality patterns, internalising and externalising, were described in terms of attachment style.	81%

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
2014 Portugal						and their parents		
Adolescent attachment and psychopathology Rosenstein & Horowitz, 1996 USA	To examine adolescent attachment and maternal attachment classifications	Cross-sectional	Autonomous[7] Preoccupied Dismissing Unresolved	DSM-III-R	N=60 Age range=13.08-19.75 (mean age=16.36) Clinical (Inpatient) Adolescents and their mothers	1. Diagnostic assessment 2. Psychological test battery 3. Psychiatric symptoms and personality dimensions 4. Symptom Checklist—90—Revised (SCL–90–R) - AAI 5. Adult Attachment Interview (AAI) Data from: participants for the personality measure. Participants and their mothers for the attachment measure	Adolescents and maternal attachments were insecure and highly concordant. In adolescents, dismissing attachment was associated with narcissistic, antisocial. Preoccupied attachment was associated with obsessive-compulsive, histrionic, borderline	72%

[7] Correspondence of attachment according to the classification used in this review:

- Autonomous (secure), preoccupied (preoccupied), dismissing (dismissing) and unresolved (fearful)

Title, Author, Year, Location	Study Aim	Study Design	Attachment Classification	Personality Disorder Classification	Sample Characteristics	Measure Respondent	Key Findings Relevant to Current Review	Quality (%)
							or schizotypal personality disorders.	
First empirical evaluation of the link between attachment, social cognition and borderline features in adolescents Sharp, Venta, Vanwoerden, Schramm, Ha, Newlin, Reddy & Fonagy, 2015 USA	To examine the association between attachment, social cognition, emotion dysregulation, and borderline features in adolescence.	Cross-sectional	Coherence scale (as attachment security)	Not stated	N=259 Age range=12-17 years (mean age=15.42) Clinical (inpatient)	1. The Child Attachment Interview (CAI) 2. MASC – measure of hypermentalisation 3. The Difficulties in Emotion Regulation Scale (DERS) 4. Borderline Personality Disorder Features Scale for Children (BPFSC) 5. Youth Self Report (YSR) of internalising and externalising symptoms Data from: participants	Hypermentalisation and emotion dysregulation together mediated the relation between attachment coherence and borderline features, but this effect is driven by hypermentalisation.	83%

employed a longitudinal design. This is a general criticism of the studies in this review, as the cross-sectional methodology employed in most studies does not allow exploration of causal relationships. Moreover, the data from the two longitudinal studies was based on the same sample. Both studies satisfied the inclusion criteria for the review for one study (Crawford et al., 2006) investigated the relationship between attachment and all personality disorders and the other study (Crawford et al., 2009) examined attachment only as related to borderline personality disorder.

Three studies employed sample randomisation (Crawford et al., 2006, 2009; Nakash-Eisikovits et al., 2002), although as already stated two of these studies used data from the same sample. One study (Deborde et al., 2012) employed a semi-randomised design and the remaining seven studies (Cicchetti et al., 2014; Fossati et al., 2011, 2014; Kim et al., 2014; Ramos et al., 2014; Rosenstein & Horowitz, 1996; Sharp et al., 2015) included convenience samples. This is a limitation of the majority of the studies, as convenience samples may not be representative of the target population and may be more affected by confounding variables. Only one study (Deborde et al., 2012) included a control group, hence all the other studies did not allow for comparison with a non-research condition group which therefore limits the interpretation of the results.

4.2.2 Sample

The samples ranged from 60 to 1051 participants (see Table 5 for details). The authors reported actual sample sizes rather than estimated required sizes. Thus it is possible that some studies were under or overpowered which could affect the likelihood that effects are detected.

There was a higher number of female participants in four studies (Deborde et al., 2012; Kim et al., 2014; Ramos et al., 2014; Sharp et al., 2015), a higher number of males in one study (Fossati et al., 2014) and similar representation of gender in four studies (Cicchetti et al., 2014; Fossati et al., 2011; Nakash-Eisikovits et al., 2002; Rosenstein & Horowitz, 1996). Two studies did not report gender (Crawford et al., 2006, 2009). Overall, there was a good representation of gender although female populations were slightly more predominant. This may have further implications for understanding personality disorder presentations as gender may play a role in the way that psychological difficulties manifest and in the individual disposition to seek help. If this is the case, some personality disorders may be underrepresented in the reviewed studies.

The mean age of participants ranged from 16-18 years in five studies (Crawford et al., 2006, 2009; Deborde et al., 2012; Fossati et al. 2011, 2014), 12-16 years in three studies (Kim et al., 2014; Ramos et al., 2014; Sharp et al., 2015) and under

12 years in one study (Cicchetti et al., 2014). One study (Nakash-Eisikovits et al., 2002) did not report mean age (age range was 14-18). There was an exception to the above in that the age of participants ranged up to 19 years in one study (Rosenstein & Horowitz, 1996). This exception was made due to the relevance of the study for this review and the description of the sample in the study as adolescents, as explained in the eligibility criteria section. Overall, most of the results of the current review pertain to adolescents. Although the presentation and expression of psychological difficulties may vary from childhood to adolescence, more studies about similar presentations in childhood would contribute to the understanding of developmental pathways of personality disorders.

There was almost an equal number of studies that included clinical samples as studies of nonclinical samples. One study focused on clinical outpatients (Ramos et al., 2014), three studies on clinical inpatients (Kim et al., 2014; Rosenstein & Horowitz, 1996; Sharp et al., 2015) and two further studies selected clinical samples but did not specify the clinical service they were drawn from (Deborde et al., 2012; Nakash-Eisikovits et al., 2002). Five studies used nonclinical samples (Cicchetti et al., 2014; Crawford et al., 2006, 2009; Fossati et al., 2011, 2014). The balance between clinical and nonclinical samples is a strength of this review.

Finally, most of the reviewed studies were conducted either in the USA or European countries (see Table 5 for details). The inclusion of studies from multiple countries poses challenges for the comparison of their results. These potential challenges refer to factors such as cultural variations in the conceptualisation of personality disorders and attachment styles and therefore in the way measures in research are completed, which may have an impact on the selection of participants and the data collected. Although this poses limitations for the interpretation of results from this review, it may facilitate that the results are generalisable to a wider population. Further research in multiple geographical areas would allow for research comparison between cultures, which may have clinical and treatment implications.

4.3 Is there a relationship between attachment style and personality disorders in childhood and adolescence?

Three studies investigated attachment as related to all ten personality disorders (Crawford et al., 2006; Nakash-Eisikovits et al., 2002; Rosenstein & Horowitz, 1996), from which one of them (Crawford et al., 2006) investigated them as grouped by clusters A, B and C (see Table 1). Other studies only included borderline personality disorder (Cicchetti et al., 2014; Crawford et al., 2009; Deborde et al., 2012; Fossati et al., 2011, 2014; Kim et al., 2014; Ramos et al., 2014; Sharp et al., 2015). The first part of this section presents results on the direct relationship between each attachment style and personality disorders.

Later, results are presented on an indirect relationship between attachment style and personality disorders and additional constructs that may play a role in that relationship.

4.3.1 Secure Attachment and Personality Disorders

Five studies (Deborde et al., 2012; Fossati et al., 2011, 2014; Kim et al., 2014; Nakash-Eisikovits et al., 2002) reported on the relationship between secure attachment and personality disorders, from which one (Nakash-Eisikovits et al., 2002) focused on all personality disorders whilst the others focused only on borderline personality disorder. In the study by Nakash-Eisikovits et al. (2002) secure attachment was negatively correlated with each personality disorder except histrionic (see Table 6 for details). This association was also stronger in personality disorders characterised by social withdrawal such as schizoid, schizotypal and avoidant.

Table 6: Association between secure attachment and personality disorders (Nakash-Eisikovits et al., 2002)

Cluster A	Paranoid	$r(288) = -.25$, $p < .001$
	Schizoid	$r(288) = -.50$, $p < .001$
	Schizotypal	$r(288) = -.40$, $p < .001$
Cluster B	Antisocial	$r(288) = -.24$, $p < .001$
	Borderline	$r(288) = -.29$, $p < .001$
	Histrionic	$r(288) = -.14$, p = NS
	Narcissistic	$r(288) = -.33$, $p < .001$
Cluster C	Avoidant	$r(288) = -.33$, $p < .001$
	Obsessive	$r(288) = -.21$, $p < .001$
	Dependent	$r(288) = -.20$, $p < .001$

Deborde et al. (2012) found borderline personality disorder negatively associated with secure attachment, $r(103) = -.31$, $p < .001$, and that secure attachment predicted low levels of borderline severity, $\beta = -.31$; $p < .001$. Fossati et al. (2011) also showed that secure attachment (reflected as *Confidence*) was negatively associated with borderline personality disorder, $\beta = -.21$, $p < .001$, albeit with relatively low reliability of the borderline scale. Fossati et al. (2014) reported similar results however they did not reach significance.

Similarly, Kim et al. (2014) found borderline personality disorder to be negatively associated to paternal attachment security, $r(226) = -.30$, $p < .001$, and maternal security, $r(226) = -.18$, $p < .05$. Further analysis found that in females only the relationship between attachment and paternal security was significant.

4.3.2 Preoccupied Attachment and Personality Disorders

Three studies explored the relationship between preoccupied attachment and all personality disorders (Crawford et al., 2006; Nakash-Eisikovits et al., 2002; Rosenstein & Horowitz, 1996). Nakash-Eisikovits et al., (2002) reported that preoccupied attachment was positively associated with borderline, $r\ (288) = .20$, $p < .001$, histrionic, $r(288) = .33$, $p < .001$, and dependent, $r(288) = .32$, $p < .001$, personality disorders and inversely associated with schizoid personality disorder, $r(288) = -.19$, $p < .001$. Similar results were obtained in the study investigating

differences between the preoccupied and the avoidant attachment groups (Rosenstein & Horowitz, 1996). Although the numbers of participants were insufficient for statistical analysis all participants with obsessive-compulsive, histrionic and schizotypal personality disorders, as well as a majority of the borderline personality disorders (64%), had a preoccupied attachment. A strength of this study is that differences in attachment styles were found not to be related to intelligence or severity of psychopathology as confounding variables.

Borderline personality disorder was also found to be correlated with this attachment style in six studies in studies that only included this personality disorder (Cicchetti et al., 2014; Crawford et al., 2009; Deborde, 2012; Fossati 2011, 2014; Ramos et al., 2014). Deborde et al. (2012) found a correlation, $r(103) = .36$, $p < .001$, as well as regression analysis that showed preoccupied attachment predicted higher levels of borderline severity, $\beta = .36$; $p < .001$. Fossati et al. (2011) found their borderline scale was associated with *Preoccupation with Relationships*, $\beta = .24$, $p < .001$, and in a later study (2014) reported significant Dunnett contrasts[8] ($p < .05$)[9] between high-borderline

[8] Dunnett's test is a multiple comparison procedure designed to compare each of a number of treatments with a single control group (Everett & Shrondal, 2010)

symptoms and other control groups demonstrating that the high-borderline symptom scored higher in *Preoccupation with Relationships*. Crawford et al. (2009) also reported increases in attachment anxiety leading to large elevation in borderline symptoms and Cicchetti et al. (2014) noted children in a high borderline personality group having more preoccupied attachment compared to a control group, although the relevant statistics were not reported in either.

The study by Crawford et al. (2006), which included all personality disorders, seems to confirm some of the results described above. Preoccupied attachment was initially correlated to all clusters but only remained significantly associated with cluster B[10], $r(727) = .16$, $p < .05$, and C[11], $r(727) = .09$, $p < .05$, after controlling for co-occurring personality disorder symptoms within each cluster. However, not only were these effect sizes relatively small but when overanxiety was added within a regression analysis model, preoccupied attachment lost significance in adolescence in all clusters. Overanxiety and its relationship with preoccupied attachment was not clearly stated and statistical values were not provided, therefore making it difficult to draw conclusions other than those

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[9] *t* ratio not reported

[10] Antisocial, borderline, histrionic and narcissistic personality disorders

[11] Avoidant, obsessive-compulsive and dependent personality disorders

reported by the authors. A further criticism of the study is that clusters may not be sensitive to individual differences between specific personality disorders.

Contrary to the studies presented above, Ramos et al. (2014) explored the differences in preoccupied attachment between two subgroups of borderline personality disorder classified according to further clinical characteristics, i.e. internalising[12] and externalising[13] symptoms. Significantly higher numbers of participants with preoccupied attachment were found present in the internalising group, X^2 (2, N = 60) = 13.2, p < 0.01. These individuals also met more criteria for borderline personality disorder at a higher severity level.

4.3.3 Dismissing Attachment and Personality Disorders

Crawford et al. (2006) found avoidant attachment associated with cluster A (paranoid, schizoid and schizotypal), r(727) =.14, p < .05. This association remained consistent before and after adjusting for co-occurring symptoms and

[12] The internalising group presented with higher rates of self-harm, suicidal behaviour, identity diffusion, self-devaluation, body disapproval, peer insecurity, anxious feelings and depressive affect.

[13] The externalising group was characterised by higher rates of impulsive sexual conduct, aggressive conduct, aggressive behaviour, social insensitivity and substance use.

after controlling for confounding variables (such as age, gender, ethnicity and socioeconomic background), although the effect size was small. Nakash-Eisikovits et al. (2002) found the same associations when investigating personality disorders individually instead of by clusters. Additionally, this second study also found this attachment style related to histrionic, narcissistic and obsessive-compulsive personality disorders (see Table 7).

Table 7: Association between preoccupied attachment and personality disorders

(Nakash-Eisikovits et al., 2002)

Cluster A	Paranoid	$r(288) = .20, p < .001$
	Schizoid	$r(288) = .37, p < .001$
	Schizotypal	$r(288) = .28, p < .001$
Cluster B	Antisocial	$r(288) = .12, p$ = NS
	Borderline	$r(288) = -.05, p$ = NS
	Histrionic	$r(288) = -.15, p < .01$
	Narcissistic	$r(288) = .19, p < .01$
Cluster C	Avoidant	$r(288) = .12, p$ = NS
	Obsessive	$r(288) = .20, p < .001$
	Dependent	$r(288) = -.22, p$ = NS

Rosenstein and Horowitz (1996) found that all patients with narcissistic personality disorders had dismissing attachment styles, although the number of participants was too small for statistical analysis.

Three studies (Crawford, 2009; Fossati et al., 2014; Ramos et al., 2014) found an association between avoidant attachment style and borderline personality

disorder. It is important to note that all of these studies also showed a significant relationship between borderline personality disorder and anxious attachment, as described in the previous section, which was stronger than the relationship with avoidant style. There were significant higher rates of avoidant styles in the group with high-level symptoms as compared with low-level symptoms group (Fossati et al., 2014), demonstrated by significant Dunnett contrasts ($p < .05$)[14], and in the internalising group as compared with the externalising group (Ramos, 2014), X^2 (2, N = 60) = 13.2, p = < .01.

4.4.4 Fearful attachment and personality disorders

This attachment style was considerably less reported in the reviewed studies than the preoccupied and dismissing styles. Only one study reported disorganised attachment in relation to all personality disorders (Nakash-Eisikovits et al., 2002), as shown in table 8. The authors argued that fearful style was positively correlated with most personality disorders, specifically paranoid, schizoid, schizotypal, borderline, narcissistic, avoidant, obsessive-compulsive and dependent personality disorders. From these, the strongest positive relationship was present for borderline and avoidant personality disorders.

[14] *t* ratio not reported

Table 8: Association between fearful attachment and personality disorders

(Nakash-Eisikovits et al., 2002)

Cluster A	Paranoid	$r(288) = .37$, $p < .001$
	Schizoid	$r(288) = .25$, $p < .001$
	Schizotypal	$r(288) = .27$, $p < .001$
Cluster B	Antisocial	$r(288) = .03$, p = NS
	Borderline	$r(288) = .39$, $p < .001$
	Histrionic	$r(288) = .13$, p = NS
	Narcissistic	$r(288) = .17$, $p < .01$
Cluster C	Avoidant	$r(288) = .44$, $p < .001$
	Obsessive	$r(288) = .28$, $p < .001$
	Dependent	$r(288) = -.31$, $p < .001$

From the studies that only focused on borderline personality disorder, Deborde et al. (2012) found a positive relationship between this attachment and borderline severity, $r(103) = .23$, $p < .05$, and that this attachment significantly predicted borderline severity, $\beta = .23$; $p < .05$. Fossati et al. (2014) also found borderline personality disorder associated with disorganised style. However, the claim made by Fossati et al. (2014) was difficult to interpret. The reason for this is that the scale *Need for Approval*, employed by this study, is equated to both anxious and fearful attachments, therefore making it not possible to compare with the attachment classification used in most other studies and in this review.

4.4.5 Additional Constructs Relevant to Attachment and Personality Disorder

As previously stated, additional constructs were included in some studies in order to explain the relationship between attachment and personality disorders.

These constructs were also intended to help further discriminate personality disorders that reflect a similar attachment style but present heterogeneous characteristics.

4.4.5.1 Aggression

One study (Crawford et al., 2006) found that interpersonal aggression was not associated with cluster A[15], β =.04; *p* = NS, but was strongly positively associated with cluster B[16], β =.25; *p* < .001, and inversely associated with cluster C[17], β = -.10; *p* < .001. Crawford et al. (2006) argued that because clusters B and C were both associated with anxious attachment, interpersonal aggression allowed for discrimination between both groups.

4.4.5.2 Alexithymia

Deborde et al. (2012) investigated the role that alexithymia[18] played in explaining the role of attachment in the development of borderline personality disorder.

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[15] Paranoid, schizoid and schizotypal personality disorders

[16] Antisocial, borderline, histrionic and narcissistic personality disorders

[17] Avoidant, obsessive-compulsive and dependent personality disorders

[18] Alexithymia has been described as the difficulty in identifying and describing feelings and as a specific and externally oriented thinking style (Taylor, Bagby, & Parker, 1997).

Individuals with borderline personality scored significantly higher in alexithymia than control groups, $r(103) = .46$, $p < .001$. The authors found that low levels of alexithymia only partially explained the protective effect of secure attachment but fully explained the predictive power of disorganised attachment. The influence of anxious attachment on borderline severity was not mediated by alexithymia.

4.4.5.2 Mindfulness

In one study, Fossati et al. (2011) found that mindfulness[19] was significantly linked to borderline personality disorder and to all insecure attachment styles, even after controlling for gender. In particular, both the *Need for Approval* and the *Mindfulness scales* explained about 21% of the variance of borderline personality disorder, $R^2 = .21$, $p < .001$, although these results did not control for the effects of the other attachment scales. Moreover, approximately 47% of the original effect of the *Need for Approval* scale, as reported in a previous section, on borderline personality disorder was due to the mediating effect of mindfulness ($P_M = .468$).

[19] Mindfulness is defined as keeping consciousness in the present reality (Brown & Ryan, 2003).

4.4.5.3 Mentalisation

In assessing the relationship between attachment, borderline personality disorder and mentalisation[20], Fossati et al. (2014) found that all insecure attachment styles, as measured by *Relationship as Secondary* and *Need for Approval* scales, showed significant negative relationship with mentalisation even after controlling for confounding variables, $r(91) = -.23$, $p < .05$. In another study, Sharp et al. (2015) found that hypermentalising and emotion dysregulation mediated the effects of attachment on borderline personality disorder when considered together, but only hypermentalising was an independent mediator. Together, these predictors accounted for nearly 60% of the variance in borderline personality disorder (adjusted $R^2 = .59$). These findings suggest a connection between mentalisation and emotion dysregulation.

4.4.5.4 Emotion Dysregulation

In Kim et al.'s (2014) study, positive emotion accounted roughly for 19% of the path from paternal attachment insecurity to borderline personality disorder features and 41% of the path from maternal attachment insecurity to borderline

[20] Mentalisation has been described as the ability to represent and interpret the mental states and actions of self and others (Bateman & Fonagy, 2004). The dimension employed by Fossati et al. (2014) conceptualises mentalisation as the ability to identify emotional states in others

personality disorder but there was a nonsignificant mediating effect of negative emotion, β= .01, p =.924 for father and β =.01, p = .896 for mother. Negative emotion, however, acted as a moderator between paternal attachment insecurity and borderline personality disorder, β =.29, R^2_{change} = .07, F_{change} (1, 175) = 18.11, p < .001, whilst positive emotion had no moderation effects. This was only significant at low level of emotion indicating that the protective effect of paternal attachment security diminished as the effect of negative emotion increased. When investigating these relationships further, paternal attachment was directly associated with positive emotion, which in turn was associated with borderline personality disorder when moderated by negative emotion. These results indicate that paternal security protected against the development of borderline personality disorder by increasing positive emotion but only in adolescents whose use of negative emotion regulation strategies was low. The results, however, did not support a model in which parental attachment insecurity led to the development of negative emotion regulation strategies. Moreover, Fossati et al. (2014) found a positive relationship between emotion dysregulation and *Preoccupation with Relationship*, partial r = .29, p < .02, and *Need for Approval*, partial r = .24, p < .05, scales. In contrast, Sharp et al.'s findings (2015) diverge from these as they found that emotion dysregulation mediated the effects of attachment on borderline personality disorder only when considered together with hypermentalisation.

5. DISCUSSION

This section provides an integration of the findings from the reviewed studies in relation to the context of the wider existing literature. Clinical implications of these findings are also considered.

5.1 Integration of Findings

The current review aimed to identify whether there is a relationship between attachment styles and personality disorders in children and adolescents. This association was found in all studies reviewed, which confirms the relevance of attachment theory (Bowlby, 1969) in understanding personality development, including the development of personality disorders. These findings are comparable to those found in the existing reviews of adult populations (Bakermans-Kranenburg & van Ijzendoorn, 2009; Levy et al., 2015). For consistency of the discussion, the integration of findings is presented by attachment style.

5.1.1 Secure Attachment and Personality Disorders

Previous empirical literature has focused on the effects of insecure attachment on personality disorders and therefore has generally not reported the connection between secure attachment and personality disorders. Likewise, the

studies included in this review mostly focused on insecure attachment styles. Nevertheless, some studies reported on secure attachment and, as it would be expected, found it negatively associated with personality disorders.

5.1.2 Preoccupied Attachment and Personality Disorders

Existing literature suggests that preoccupied attachment characterised individuals presenting with borderline, histrionic, dependent and avoidant personality disorder and this was confirmed in the current review. Additionally, antisocial, narcissistic and obsessive-compulsive personality disorders were also found to be related to preoccupied attachment style in this review, however there was less evidence for this.

Overall, preoccupied attachment seemed to be mostly associated with those personality disorders that reflect intense emotional responses (cluster B) such as borderline, histrionic, antisocial and narcissistic, as well as personality disorders characterised by anxious and fearful behaviour (cluster C) such as dependent, avoidant and obsessive-compulsive. This makes sense clinically as these disorders are characterised by elevated anxiety about abandonment, separations and rejection (Crawford et al., 2006).

5.1.3 Dismissing Attachment and Personality Disorders

The existing literature indicates that paranoid, narcissistic, antisocial and schizoid personality disorders are related to a dismissing attachment style, which was confirmed in this review. In addition to this, schizotypal and obsessive-compulsive personality disorders were also linked with dismissing attachment style in this review.

The relationship between dismissing style and paranoid, schizoid and schizotypal personality disorders (cluster A) seems clinically sound as these personality disorders may reflect a stronger focus on internal world, thus a lesser focus on interpersonal relationships. In addition to this, some of the personality disorders that were found to be present in preoccupied attachment were also present in dismissing style, for example narcissistic, antisocial and obsessive-compulsive personality disorders. Although it may seem contradictory that these disorders were found to be associated to both attachment styles, these disorders seem to reflect individuals who appear as more independent from others, minimise the importance of relationships or have a stronger focus on themselves. However, these disorders are also characterised by anxiety. Therefore, this finding may mean that individuals present with different levels of anxiety and avoidance within the same personality disorders.

5.1.3 Fearful Attachment and Personality Disorders

Fearful attachment has been linked in the existing literature with schizotypal, paranoid, avoidant, borderline, obsessive-compulsive and narcissistic personality disorders, which was also confirmed in this review. In addition to this, schizoid and dependent personality disorders were also found within this attachment style in this review. Most of the personality disorders were associated with this style, and thus some personality disorders that were associated with either preoccupied or dismissing styles were also associated with fearful style. This seems consistent with attachment theory in that this style presents both high anxiety and high avoidance and shares characteristics from the other two attachment styles.

Overall, it was apparent in this review that all personality disorders, apart from histrionic personality disorder, were linked with more than one attachment style, although to a different extent. This is also evident from the existing literature. The indefinite nature of these associations may be interpreted as representing a relationship that is insufficiently important. However, the presence of significant associations in all studies reviewed may suggest these associations are important but that the categorical nature of the attachment classifications employed in the reviewed studies lack sensitivity to reflect the complex and fluctuating styles of thinking, feeling and relating that individuals present with. Indeed, it has been argued that dimensional data has benefits over categorical data (Nakash-

Eisikovits et al., 2002). Furthermore, it may also indicate that the current classification for personality disorders does not capture accurately the individual and unique clinical presentations that are described as personality disorders.

In addition to the above, there were only three studies of those reviewed that included all personality disorders and therefore this is insufficient to make more definite conclusions. In contrast, borderline personality disorder was individually addressed in many studies in the current review and was mainly found to be associated with preoccupied attachment, although also present in dismissing and fearful attachments to a lesser extent. This again, is consistent with the literature that suggests that people with borderline personality disorders present mainly with high anxiety but may present with a combination of avoidance and anxiety, which is reflected in fearful attachment (Levy et al., 2005). The apparent more definite associations between attachment style and borderline personality, which has been more researched, may confirm that the limited available evidence on all personality disorders poses difficulty when drawing attempting to draw conclusions.

The results from this review also support existing literature that indicate the significance of additional constructs in explaining the effect of attachment on the development of personality disorders. In this, it confirms the claim in existing

literature that aggression (Critchfield et al., 2008), mentalisation (Fonagy & Bateman, 2008) and other related constructs such as emotion dysregulation (Linehan, 1993) play a significant role in mediating the developmental pathway between early experiences of caregiving and relational contexts and the later development of personality difficulties.

5.1.4 Summary of Findings

In summarising what has been discussed so far, the findings from the current review were consistent with previous literature in the associations found between attachment styles and personality disorders. Moreover, the review reported further associations that were not reflected in the literature. This may indicate that adolescents exhibit more characteristics of personality disorders than adults, which would appear consistent with the literature that suggests that personality disorder features are highest in adolescence (Johnson, Bromley et al., 2006). However, the limited number of studies that included all personality disorders makes it difficult to discriminate if results were an effect of a typical variability in the population.

Lastly, it was apparent that most personality disorders were present in more than one attachment style, although they were usually more prominent in only one style. This has also been found in the wider literature. For example,

borderline personality disorder is more typically associated with preoccupied attachment, although some literature has also shown it to be related to dismissing attachment (Crawford et al., 2009). Crawford et al. (2009) suggested that this might reflect a difference in how individuals attempt to cope with attachment anxiety, and thus some individuals may distance themselves from close relationships whilst others may seek proximity instead. As aforementioned, this may relate to an insufficient sensitivity of categorical classifications of attachment and of personality disorders and further studies that employ dimensional measures may address this issue. Of interest, Deborde et al. (2012) suggested that, sometimes, the relationship between attachment and personality disorders can be better explained by the self and other attachment models (Hazan & Shaver, 1987), which is a different attachment classification.

Another possible explanation for the presence of personality disorders in more than one attachment category could be that differences in personality disorders can be better explained by additional factors or mechanisms. In this line, studies in this review found that some of these factors are interpersonal aggression (Crawford et al., 2006), alexithymia (Deborde et al., 2012), mindfulness (Fossati et al, 2011), mentalisation (Fossati et al., 2014) and emotion dysregulation (Fossati et al., 2014; Kim et al., 2014). Likewise, existing literature reports similar factors involved in the relationship between attachment and personality disorders (for example Critchfield et al., 2008; Fonagy & Bateman, 2008; Linehan,

1993). This is clinically important as, for example, some individuals with the same personality disorder may require help regulating their expression of anger whereas others may need help with expressing it and therefore with becoming more assertive.

The findings in this review may support the idea that attachment can be seen as a foundation for personality development and, moreover, difficulties associated with personality functioning. However, the associations found in the studies may also be interpreted in a different way. Because it is not possible to establish causal relationships, it is not known the time order in which these two constructs take place and therefore it could be that personality disorders develop first and have a negative effect on interpersonal relationships and attachment. In addition to the above, the outcomes from the current review also support theories suggesting that other mechanisms play an important role in the developmental pathway between attachment and personality disorders.

5.1.5 Implications of Findings

The evidence provided in the current review confirms that attachment theory provides a useful and meaningful framework for understanding the development of presentations that are referred to as personality disorders (Olson & Dweck, 2008). This has important implications for preventative as well as treatment

interventions. Evidence that personality partly develops within early and close relationships, as well as the serious consequences that personality related difficulties may have in children and adolescents' development, can inform interventions targeted at promoting positive attachment relationships. These interventions are already the focus of government initiatives and findings like those in this review can help support such initiatives (Department of Health, 2015).

In regards to treatment interventions, it seems justified that mental health services should have a stronger focus on personality development, especially due to the prevalence of personality disorders in adolescents (Shiner, 2009). Furthermore, the literature suggests that primary complaints such as depression or anxiety may indeed reflect difficulties of personality functioning (Zimmerman et al., 2005). As these difficulties may go unnoticed, it is suggested that reference to personality and attachment styles is routinely incorporated into assessments and treatment plans. Furthermore, because of the impact of attachment relationships, families and dynamics within the family should be a key part of treatment if the therapeutic outcomes for children and adolescents are to be maximised.

Specific to psychological therapies, the findings from this review highlight the significance of dynamic and relational processes for treatment, as they are likely to affect the therapeutic alliance, the process of therapy and its outcomes (Blatt & Levy, 2003). Moreover, because most research has focused on borderline personality disorder, most treatments from an attachment-focused perspective have been developed and evaluated only for this personality disorder (Levy et al., 2015). Therefore further treatments developed and evaluated for other personality disorders should be considered (Levy et al., 2015).

Finally, it was stated in the introduction of this review that some consideration would be given to the use of personality disorders diagnoses in children and adolescents. Despite the above evidence that these clinical presentations require more attention, it has been suggested that categorical classifications of both attachment and personality disorders may not be most representative (Nakash-Eisikovits et al., 2002). Moreover, categorical classifications may misrepresent the idiosyncratic and dynamic ways that characterise individuals, and that are likely to fluctuate in response to external and internal experiences. An alternative classification of these presentations may be personality prototypes that are empirically derived, which have been proposed as more sensitive to personality differences (Nakash-Eisikovits et al., 2002). Furthermore, another alternative to categorical classifications are psychological formulations, which are intended to reflect the complexities and nuances of each individual as well as

including the ways in which individual personal history may have shaped their current presentations (Johnstone & Dallos, 2006).

6. CONCLUSION

This section will further the evidence presented above by considering the limitations of the current review in order to propose recommendations for further research.

6.1 Limitations of Current Review

There are several limitations to this review that should be taken into consideration when interpreting its results. There may have been a publication bias due to the inclusion criteria, which set the age for inclusion below 18 years old. This criterion was based on the transition age from children and adolescents mental health services into adult services. However, following recent policy changes, some children and adolescents services are being set up to offer treatment to individuals up to the age of 25, reflecting that many developmental changes may still take place during these years (NHS Birmingham CrossCity CCG, 2015). Therefore this review may have omitted studies that are relevant for the topic of this review. Also regarding age, there were some participants in one study who were 19 years old and this may alter the nature of the sample and exclude other participants of this age from other studies. Similarly, this review

did neither reflect further current changes that may have an impact on the conclusions to be drawn. The current DSM-5 was published in 2013 (APA, 2013a) however most studies in this review followed DSM-IV (APA, 2000). It is unlikely, however, that this may have changed the results of this review as the same personality disorders remain in the newer edition of the diagnostic manual.

Another possible limitation of this review is that it only set to find evidence for the association between attachment styles and personality disorders, in childhood and adolescents. In doing this, it excluded research on other factors known to relate to attachment, such as childhood trauma, maltreatment or parental attachment styles and behaviours. Whilst this review included other constructs that may play a part in the developmental pathways between attachment and personality disorder, they were only included in the context of this relationship. This is likely to have omitted important factors for the understanding of personality disorder development.

Finally, the limited number of studies focusing on all personality disorders, as opposed to only borderline personality disorder, poses a constraint for the interpretation of the results. Nevertheless, the findings indicate the relevance of further considering and investigating this relationship.

6.2 Future Research

The evidence discussed above suggests that children and adolescents present with clinical difficulties that can be compared with presentations referred to as personality disorders. Because of the serious and enduring effects that these presentations may have on the development of children and young people, it seems granted that this area is given an increased focus. This recommendation is irrespective of the terminology used to refer to these presentations. Although the topic on terminology and approach to personality disorders is not for discussion in this review, it has been suggested that the language used to refer to these presentations is changing (Adshead et al., 2012). Future research should consider innovative approaches to personality disorders that are more dynamic and individual and encompass the complexities and variability seen in these presentations (see section III of APA, 2013b).

It is apparent that this is a relatively infant area of research, especially in childhood and adolescence. It has been suggested that the research on borderline personality disorders, including in adolescence, have increased in recent years however there is still limited research especially on other personality disorders (Levy, 2015). For this reason, it is recommended that further investigations aim at understanding these developmental pathways. In particular, the lack of longitudinal studies highlights an important area for research. Moreover, as most attachment-focused interventions have been

developed and evaluated for borderline personality disorders future research should also focus on interventions for other personality presentations.

The difference in methodologies employed by the reviewed studies, especially of attachment classifications, makes it difficult to compare their results. In an attempt to address this, future research could replicate studies using the same methodologies. Further research should also reflect current changes and incorporate newer classifications systems. Moreover, the use of dimensional and more sensitive classifications is recommended over categorical classifications, including different classifications, for example self and other attachment models.

In regards to literature reviews, it is recommended that future reviews reflect current changes and extend the age of adolescence up to 25 years old. Additionally, future reviews may benefit from including other factors that have been found relevant to the relationship under review, such as interpersonal aggression, mentalisation and emotion regulation. Lastly, and although this was not included in this review, it is recommended the review of effect sizes of relationships between attachment related variables and personality disorders. This may include age and gender as well as difference in the effects of maternal attachment as compared to paternal attachment, as some studies seemed to

show a difference according to gender and some studies only studied attachment to one parent (for an example see Cicchetti et al., 2014).

To conclude this review, the field of attachment as related to personality disorders, especially in children and adolescents, is a relatively new area of research and practice that warrants further attention as well as offering promising future directions.

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CHAPTER II: EMPIRICAL PAPER

An Exploration of Resilience

A Quantitative Exploratory Study of the Relationship Between Resilience, Attachment and Indicative Personality Disorder in a Sample of Secondary School Students

Prepared for submission to Journal on Research on Adolescence (please refer to Appendix 3 for instructions for authors). Amendments will be made to reduce the introduction and method sections to submit for publication.

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1. ABSTRACT

Background: Attachment has been consistently associated with resilience as well as being considered a protective factor against the development of personality disorders. No studies, however, have examined the three constructs together.

Aims: The present study aims to provide a preliminary exploration of the interaction between resilience, attachment and personality disorder in a sample of secondary school students.

Method: This study employed a quantitative cross-sectional methodology. 343 secondary school students aged 16-20 completed measures of resilience, attachment styles and a screening measure of personality disorder.

Results: The findings of this study confirmed that there are individual associations between each of the variables. Furthermore, resilience mediated the effect of attachment on personality disorder.

Conclusions: The mechanisms involve in resilience help explain the effect of attachment on the development of personality disorders. Further research may focus on such mechanisms and their interaction with other factors as well as including development and evaluation of resilience interventions. The findings also have implications for preventative interventions and school practices.

Keywords*: resilience, attachment, personality disorder, personality development, young people, adolescence*

2. INTRODUCTION

It has been proposed that individuals react to adversity in varied ways and that these distinctive physiological and psychological responses are related to the construct of resilience (Franklin, Saab, & Mansuy, 2012). In this section, the construct of resilience is presented, followed by a brief overview of the research into resilience and its relationship with mental health. Following this, attachment theory is discussed, both as a framework for the development of resilience and for its role in the development of personality pathology. Lastly, a stronger focus on resilience in at-risk populations is described which leads onto the rationale for this research.

2.1 Resilience

Resilience has been referred to as "the process of adapting to significant stress, trauma, threat or adversity" (American Psychological Association, 2015). It has been estimated that half of the adult population will experience at least one traumatic episode during their lives, such as violence, life threatening or loss related experiences (Giesbrecht et al., 2009). However, most individuals are able to adjust after traumatic events without developing severe distress or psychological problems (Campbell-Sills, Cohan, & Stein, 2006). Therefore, understanding resilience has important clinical implications for preventative interventions and improving mental health (Department of Health, 2015). This is

particularly important in adolescence, since half of all lifetime mental health problems begin by this age (Kessler, Amminger, Aguilar-Gaxiola, Alonso, & Lee, 2007). Current preventative initiatives recommend collaboration between mental health and education services (British Psychological Society [BPS], 2009). Despite the relevance of resilience for mental health, research on this field is limited compared to research focused on mental health difficulties (Campbell-Sills et al., 2006).

Resilience is a complex construct and its operationalisation has changed over time. Resilience was traditionally understood as an intrinsic and non-modifiable human characteristic (Leppin et al., 2014) and so early theories addressed resilience as an individual characteristic (Rutter, 1985; Werner, 1984). Later theories included external protective factors such as supportive schools and positive relationships with adults (Luthar, Cicchetti, & Becker, 2000), and evidence continued to demonstrate that resilience could be taught and developed (Connor & Zhang, 2006; Maddi et al., 2006; Steinhardt & Dolbier, 2008; Waite & Richardson, 2004). Current theories view resilience as a multidimensional construct, resulting from the interaction between individual characteristics and external environmental factors (Rutter, 2006; Southwick & Charney, 2012; Van Kessel, 2013; Windle, Bennett, & Noyes, 2011).

2.1.1 Resilience and Mental Health

Research seems to suggest that resilience is predictive of mental health. For example, posttraumatic stress disorder was found to be low in individuals with high resilience (Whealin et al., 2013) even following childhood trauma (Sexton, Hamilton, McGinnis, Rosenblum, & Muzik, 2015). Resilience was also found to be a protective factor in reducing the risk of suicide for individuals with childhood trauma (Roy, Carli, & Sarchiapone, 2011) and adolescents and young adults who had suffered violent life events and depression (Peng et al., 2012). In contrast, patients with depression had lower levels of resilience than control groups (Kesebir, Gündoğar, Küçüksubaşı, & Tatlıdil Yaylacı, 2013). Resilience was also related to the severity of the symptoms of depression and response to treatment (Min, Lee, Lee, Lee, & Chae, 2012; Skrove, Romundstad, & Indredavik, 2012).

1.1.2 Resilience and Personality Disorder

The previous section illustrated some of the research that has placed resilience in the context of mental health difficulties. However, resilience has rarely been studied in relation to personality disorders despite it having been proposed that they can be thought of within the same continuum as resilience (Skodol et al., 2007). Personality disorders have been described as distortions of optimal personality functioning and understood as enduring patterns of ineffective coping strategies (Eisenman, 1998). In contrast, resilient personalities reflect a

strong, well-differentiated and integrated sense of self that foster positive interpersonal relationships and allow individuals to cope with adversity (Skodol et al., 2007). In a study of sibling pairs who had been exposed to childhood maltreatment and in which one of them had developed borderline personality disorder[21], siblings who did not develop personality disorder had more external support networks and were more resilient (Paris, Perlin, Laporte, Fitzpatrick, & DeStefano, 2014). Skodol et al. (2007) also found that positive interpersonal relationships with others were associated with positive treatment outcomes for individuals with a diagnosis of avoidant[22], schizotypal[23] and borderline personality disorders. Skodol et al. (2007) also found that the positive effect of interpersonal relationships on the course of personality disorders was stronger than the negative effect of childhood abuse or neglect. These findings suggest that positive attachment relationships may have a preventative effect on the development of personality disorders. Indeed, attachment theory is increasingly

[21] A personality pattern characterised by intense emotional relationships and fear of separation and abandonment (APA, 2000)

[22] A personality pattern characterised by social inhibition, feelings of inadequacy, and hypersensitivity to negative evaluation (APA, 2000)

[23] A personality pattern characterised by social and interpersonal difficulties, including discomfort with and reduced capacity for close relationships, as well as by cognitive or perceptual distortions and culturally unusual behaviour (APA, 2000)

proposed as a framework for understanding the development of personality and, more specifically, personality disorders.

1.2 Attachment in Resilience Literature

Before considering the role that attachment may play in the development of resilience, a brief account of the theory of attachment is provided.

1.2.1 Overview of Attachment Theory

Bowlby (1980) developed attachment theory as a way of "conceptualizing the propensity of human beings to make strong affectional bonds to particular others and of explaining the many forms of emotional distress and personality disturbance, including anxiety, anger, depression and emotional detachment, to which unwilling separation and loss give rise" (Bowlby, 1980, p. 38). Bowlby (1980) considered attachment as an as evolutionary system for survival in which children are predisposed to seek out proximity with caregivers to obtain safety and regulation (Bowlby, 1969). Within responsive caregiving, attachment behaviour facilitates the development of affectional bonds or attachments, initially between child and caregiver and later between adult and adult (Bowlby, 1980). The concept of internal working models provides a foundation for understanding how attachment processes function in adult relationships (Pietromonaco & Barret, 2000). Based on early experiences of attachment,

individuals develop mental representations of themselves as more or less lovable and others as more or less available and reliable, called internal working models of self and other. These models help individuals predict and understand their environment, seek out support during stress and feel emotionally safe (Hamilton, 2000; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000; Weinfield, Sroufe, & Egeland, 2000). Work focusing on parent-child attachment (Ainsworth, Blehar, Waters & Wall, 1978) documented different patterns of behavioural responses from children. Later, Hazan and Shaver (1987) applied attachment styles to adult romantic relationships. Bartholomew and Horowitz (1991) proposed a model of attachment patterns that corresponded conceptually to attachment patterns from previous models but was applied to adult relationships in general. The four patterns are secure, preoccupied, dismissing and fearful (see Table 1).

1.2.2 Attachment and Resilience

As indicated at the beginning of this section, research suggests that attachment may play a significant role in the development of resilience, however it has been more widely discussed as a factor in psychological difficulties than as a source of resilience (Bartley, Head & Stansfeld, 2006). Sapienza and Masten (2011) indicated that positive relationships with parents, other adults and friends or romantic partners, was one of the most widely reported correlates of resilience in young people. Likewise, based on a large-scale review of research on

wellbeing, Aked, Marks, Cordon, and Thompson (2008) reported that building connections with others was consistently associated with the development of resilience. Indeed, although attachment traditionally focused on primary caregiving relationships, it is now generally accepted that children form attachment relationships with multiple relevant figures in their lives (Pearce, 2009). Furthermore, recent literature suggests that children's social-emotional development is best predicted by their network of attachment figures rather than by a single attachment relationship (Pearce, 2009). Indeed, Woodier (2011) demonstrated that resilience can also emerge in the context of other attuned and supportive relationships even in the absence of parental support. Consistent to this, extended social support has been regularly identified as a protective factor for dealing adaptively with adverse events (American Psychological Association, 2015).

Table 1: Attachment categorical styles and dimensional models based on a characterisation of anxiety/avoidance and model of self/model of other (Bartholomew and Horowitz, 1991)

Attachment Styles	Secure	Preoccupied	Dismissing	Fearful
Emotional and behavioural patterns	This pattern indicates a sense of worthiness and an expectation that others are generally accepting and responsive.	Indicates a sense of unworthiness combined with a positive evaluation of others. Individuals are highly dependent on others to maintain positive self-regard and they attempt to achieve this through a controlling and dominant interpersonal style.	Indicates a sense of worthiness combined with a negative disposition toward others. Individuals protect themselves from disappointment by avoiding close relationships and maintaining a sense of independence and invulnerability.	Indicates a sense of unworthiness combined with an expectation that others will be untrustworthy and rejecting. Individuals avoid close relationships to protect themselves against anticipated rejection.
Anxiety	Low anxiety	High anxiety	Low anxiety	High anxiety
Avoidance	Low avoidance	Low avoidance	High avoidance	High avoidance
Model of Self	Positive	Negative	Positive	Negative
Model of Other	Positive	Positive	Negative	Negative

1.2.3 Attachment Styles and Resilience

Research evidence indicates that resilience is positively associated with secure attachment (Black-Hughes & Stacy, 2013; Simeon et al., 2007). Consistent to this, Shibue and Kasai (2014) found that resilience was negatively correlated with insecure attachment in university students. Students with insecure ambivalent attachment that developed higher resilience achieved better social and economic outcomes, although this was not observed in students with avoidant attachment. Shibue and Kasai (2014) suggested that this was important as for those students with ambivalent styles it was possible to help them develop resilience by offering additional support. Another study demonstrated that resilience predicted active coping skills better than secure attachment in degree-level students (Li, 2008). The author suggested that resilience interventions might help students cope with stress better than attachment interventions. Bartley et al. (2006) found that attachment style predicted occupational attainment only for those with lower past educational attainment but not with those with highest past attainments, suggesting that attachment style may predict positive outcomes for some individuals but other factors may also be involved.

A study by Karreman and Vingerhoets (2012) investigated the mediating effects of resilience and emotion regulation on the relationship between attachment style and wellbeing. They reported that secure and dismissing attachment styles

were associated with higher wellbeing while preoccupied attachment was the style with the most adverse outcome, and fearful attachment was not directly related to wellbeing. Secure attachment was associated with higher resilience, which partially mediated the effect on wellbeing. Resilience fully mediated the relationship between dismissing attachment and wellbeing via higher emotion reappraisal, and the relationship between preoccupied attachment and wellbeing via lower emotion reappraisal. Individuals with fearful attachment also demonstrated wellbeing when higher emotion reappraisal and resilience were present. Similarly, in an adult sample, Caldwell and Shaver (2012) found that attachment anxiety and attachment avoidance were both associated with lower ego-resilience, however, the pathways of these associations were different. In particular, attachment anxiety and an elevated negative affect resulted in lower ego-resiliency. In contrast, attachment avoidance and emotional suppression were associated with lower ego-resiliency. These results reaffirm that attachment insecurities are associated with suboptimal socio-emotional functioning, but suggest distinct emotional and behavioural pathways, depending on the form of insecurity and its related emotional dynamics (Caldwell & Shaver, 2012).

1.2.4 Attachment and Personality Disorders

There is a growing theoretical and empirical body of evidence that has established links between attachment organisation in childhood and the later

occurrence of personality disorders (Page, 2001), although empirical evidence of specific associations between personality disorders and attachment styles is still limited (Levy, Johnson, Clouthier, Scala, & Temes, 2015). For example, a substantial association was found between insecure attachment and personality disorders in adolescents from a large nonclinical sample (Brennan & Shaver, 1998). In particular, Brennan & Shaver (1998) also found that adolescents with a preoccupied attachment style were more likely to present with a range of personality disorders, including obsessive-compulsive[24], histrionic[25], borderline[26] or schizotypal[27] personality disorders whilst adolescents with a dismissing attachment style were at elevated risk for personality disorders such as narcissistic[28] and antisocial[29]. Two reviews of studies reported connections

[24] A personality pattern characterised by a preoccupation with orderliness, perfectionism, and mental and interpersonal control, at the expense of flexibility, openness, and efficiency.

[25] A personality pattern characterised by excessive emotionality and attention seeking.

[26] A personality pattern characterised by instability of interpersonal relationships, self- image, and affects, and marked impulsivity.

[27] A personality pattern characterised by social and interpersonal deficits marked by acute discomfort with, and reduced capacity for, close relationships as well as by cognitive or perceptual distortions and eccentricities of behaviour

[28] A personality pattern characterised by grandiosity (in fantasy or behaviour), need for admiration, and lack of empathy

[29] A personality pattern characterised by a disregard for and violation of the rights of others

between attachment styles and personality disorders (Bakermans-Kranenburg & van Ijzendoorn, 2009; Levy et al., 2015).

1.3 Recommendations for Research from Existing Literature

Most studies of resilience have traditionally focused on clinical populations and individuals with trauma (Bonanno et al., 2004; Engelhard & van den Hout, 2007). However, it has been recommended that further studies on resilience should address different types of stressors, situations and populations to allow for generalisation of findings (Masten & Narayan, 2012). In regards to populations, there is evidence of the increase in the prevalence of psychological problems in the community. For example, reports about the increasing number of students accessing college counselling services with psychological problems (Beamish, 2005; Smith et al., 2007) suggest that students may experience mental health difficulties that are not reported to mental health services but that nevertheless may have a significant impact on their academic performance and emotional functioning (Hartley, 2012). Likewise, prevalence of psychological problems on college campuses has been reported to be as high as 30% (Eisenberg, Golberstein, & Gollust, 2007). In another study, approximately 20% of medical students sought psychiatric consultation and treatment for adjustment

problems, emotional difficulties and dependent personality disorders[30] (Gordon, 1995). When unaddressed, these difficulties in adolescence and early adulthood have been associated with an increased risk for later mental heath problems (Peng et al., 2012). Due to the significance of psychological difficulties in student populations and to continue to bridge the gap between clinical and nonclinical resilience research, a community student sample was selected for this study.

1.4 Rationale for the Current Study

As previously described, resilience is an underinvestigated construct despite numerous claims about its relevance to the literature of psychopathology as well as the potential to inform both preventative and treatment interventions. Resilience has been studied more in the context of mental health difficulties such as anxiety, depression and posttraumatic stress disorder but hardly in the context of personality disorders. Due to the large comorbidity between these disorders and other mental health difficulties (Shiner, 2009), it would be expected that resilience would also be associated with personality disorders. In addition to this, resilience has been consistently associated with attachment,

[30] Excessive need to be taken care of that leads to submissive and clinging behaviour and fears of separation (APA, 2000)

which in turn, has been proposed to influence the development of personality disorders. These three constructs, however, have not yet been studied together. The present study aims to provide a preliminary exploration into how these variables interact with each other.

Lastly, much of the previous research on attachment styles and on personality disorders has been conducted using categorical measures, however, dimensional data tends to outperform categorical data (Nakash-Eisikovits et al., 2002) Furthermore, categorical classifications may not be sufficiently sensitive to the fluctuating and unique ways in which individuals respond to external and internal experiences (Shiner, 2009). Hence, this study set out to employ dimensional measures to screen for the presence of a personality disorder in general, rather than assess for specific personality disorders. This variable is referred to as personality disorder in the current paper. A mixed measure of attachment was used to obtain both categorical attachment styles[31] and dimensional attachment models[32]. These measures are described further in the method section.

[31] Secure, preoccupied, dismissing and fearful

[32] Model of self and model of other

1.5 Aims

The current study aimed to explore the interaction between resilience, attachment and personality disorder. Specifically, the study aimed to answer the following questions:

1. What are the differences in resilience across the four attachment style groups?
2. What are the differences in personality disorder across the four attachment style groups?
3. What is the association between resilience and personality disorder?
4. Does resilience mediate the association between dimensional attachment models and personality disorder?

2. METHOD

2.1 Design

The current study employed a cross-sectional design in which quantitative data was collected at one single point in time through the use of standardised questionnaires. The variables under investigation were resilience, attachment style and personality disorder.

2.2 Participants

Participants were a purposive sample of students attending seven different secondary schools in the West Midlands region (UK). A total of 343 students participated in the study (n = 343; 137 males and 205 females). Although included in the analysis, one participant did not state their gender and twelve participants did not state their age. The ages ranged from 16-20 years (*M* = 16.79, *SD* = 0.86).

A minimum sample size of 80 participants was required given the recommendation by Kline (2005) that the number of cases to the number of free parameters should be 20:1. In the current study, there were four free parameters for the categorical attachment style variable whilst the other two variables were continuous.

2.3 Measures

*The Connor-Davidson Resilience Scale (CD-RISC) (*Connor & Davidson, 2003)

This is a 25-item scale that measures resilience as related to the ability to cope with stress. Each item is rated on a 5-point Likert scale (0-4), with higher scores reflecting greater resilience (see Appendix 4). The scale has been administered to a range of samples and demonstrates high correlations with well-established measures of concepts linked with resilience and with outcomes of resilience

(Connor & Davidson, 2003). Internal consistency ratings range from 0.76-0.91 and test-retest reliabilities have been reported to range from 0.67-0.84 (Connor & Davidson, 2003). Although this scale was originally validated with adults, its usefulness with adolescent populations has also been demonstrated (Connor & Davidson, 2003).

The Relationships Questionnaire (RQ) (Bartholomew & Horowitz, 1991)

This is an abbreviated instrument adapted from the attachment measure originally developed by Hazan and Shaver in 1987 (Bartholomew & Horowitz, 1991). The measure consists of four short paragraphs describing four prototypes of attachment styles: secure, preoccupied, dismissing and fearful (see Appendix 5). Participants select the style that best describes them, and which provides a categorical measure of attachment style. In addition to this, respondents also rate the degree to which they resemble each style on a 7-point Likert scale (1-7). These second set of ratings are used to compute scores for both dimensional attachment models, the model of self and model of other. The reliability of the questionnaire's classification has been estimated to be approximate kappas .35 and approximate *r*'s .50, which is comparable to the original measure (Crowell, Farley, & Shaver, 1999). Schmidtt et al. (2004) found substantial construct validity of the RQ and reported that the measure is independent of response biases compared to other attachment measures. The RQ has been frequently used in research and has exhibited adequate reliability and validity

(Bartholomew & Horowitz, 1991; Davila & Cobb, 2003; Scharfe & Bartholomew, 1994). Scharfe and Bartholomew (1994) reported moderate stability over 8 months (average = 0.51).

Self-administered - Standardised Assessment of Personality - Abbreviated Scale SA-SAPAS. (Merlhiot, Mondillon, Vermeulen, Basu, & Mermillod, 2014)

This questionnaires (see Appendix 6) is an adaptation of the original measure for self- administration (Merlhiot et al., 2014). This is a questionnaire for the screening of personality disorders in both general and clinical populations. It comprises of 8 items to which respondents rate *yes* or *no.* The authors reported that a cut-off score of 2 or more in both populations indicated the presence of personality disorder. The performances of the SA-SAPAS were reported as superior to those exhibited by the original version, the SAPAS developed by Moran, et al. (2003). In both clinical and general populations, the SA-SAPAS reached the expected internal consistency. It was reported that as this test is a self-administrated questionnaire that evaluates different personality traits, which can reduce its consistency, this explained why the authors obtained a Cronbach coefficient close to 0.40. They also reported to find a very acceptable Lin's concordance (between 0.89 and 0.94), thus suggesting that the SA-SAPAS exhibits a reasonably good level of stability over time.

In addition to the above measures, participants were asked to complete a standard demographics form (see Appendix 7).

2.4 Procedure

Ethical approval for the present study was granted by Coventry University Research Ethics Committee (see Appendix 8). The British Psychological Society Code of Human Research Ethics (2010) was adhered to throughout the research.

Forty-four schools in the West Midlands were contacted by phone, followed by email, and offered the opportunity to take part in the study. The email sent to schools included a letter with information for the study (see Appendix 9). The schools were contacted on the basis that they offered education to students aged 16 years old. Although ten schools chose to participate, three of them were unable to do so in the timeframe provided hence final data collection was from seven schools. Staff from the participating schools selected the student classes to take part. All students were given a pack with information about the study, including details on consent, confidentiality and the right to withdraw their data. The complaints procedure and details for independent support organisations were also provided (see Appendices 10 and 11). Four, out of the seven participating schools, requested to administer the questionnaires themselves. The researcher administered the questionnaires in the other three schools and was available to explain the study to the students and answer any questions. All

questionnaires were completed as a class group and all participants completed a consent form (see Appendix 12).

The data collected was analysed using the Statistical Package Software for Social Sciences (SPSS) version 22.

3. RESULTS

To examine differences between attachment styles[33], the data was inspected to determine whether it met the assumptions for parametric testing. The data was of interval level and normally distributed. There was also homogeneity of variance for both resilience and personality disorder between the four categorical attachment styles. Outputs of the data for all statistical analyses can be found in Appendices 13-16.

3.1 Resilience and Attachment

The highest ratings for self-reports of resilience were found for those participants of secure attachment (*M* = 66.63, *SD* = 11.46) followed by those of

[33] Secure, preoccupied, dismissing and fearful.

dismissing (*M* = 63.34, *SD* = 14.23) and then preoccupied attachment (*M* = 57.25, *SD* = 13.49). The lowest scoring category was fearful attachment (*M* = 55.52, *SD* = 13.26). A one-way between groups ANOVA revealed that significant differences were present between these four categories: $F_{(3, 321)} = 14.19$, $p < .001$.

Post-hoc Tukey tests revealed significant differences between secure attachment and both fearful ($p < .001$) and preoccupied attachments ($p < .001$), but not dismissing attachment style ($p = .31$). There were also significant differences in the means between fearful and dismissing attachments ($p = .001$) but not preoccupied attachment ($p = .89$). Finally, the differences in scores between preoccupied and dismissing attachments approached significance ($p = .06$). Further analyses indicated that fearful and preoccupied attachments ($p = .85$) and secure and dismissing attachments ($p = .42$) formed homogenous subsets regarding self-reported levels of resilience.

3.2 Attachment and Personality Disorder

The highest ratings for self-reported indication of a personality disorder were found for those participants of fearful attachment (*M* = 2.37, *SD* = 1.62) followed by those of preoccupied attachment (*M* = 2.02, *SD* = 1.29) and then dismissing attachment (*M* = 1.41, *SD* = 1.50). The lowest scoring category was secure

attachment (*M* = 1.03, *SD* = 1.12). A one-way between groups ANOVA revealed significant differences between these four categories: $F_{(3, 321)} = 17.13$, $p < .001$.

Post-hoc Tukey tests revealed significant differences between secure attachment and both fearful ($p < .001$) and preoccupied attachments ($p < .001$), but not dismissing attachment ($p = .23$). There were also significant differences in means between fearful and dismissing attachments ($p < .001$) but not preoccupied attachment ($p = .52$). Finally, the differences in scores between preoccupied and dismissing attachments was not significant ($p = .09$). Further analyses indicated that fearful and preoccupied attachments ($p = .43$) and secure and dismissing attachments ($p = .34$) formed homogenous subsets regarding self-reported indications of personality disorder.

3.3 Resilience and Personality Disorder

Pearson's correlations were performed to determine the relationship between self-reported levels of resilience and personality disorder. A statistically significant negative correlation was found between resilience and personality disorder, $r(343) = -.329$, $p < .01$. Therefore, the results indicated that increased resilience was associated with decreased personality pathology. These correlations were then performed for each category of attachment and the results are presented in Table 2.

Table 2. Pearson's correlations between resilience and personality disorder for the four categorical attachment styles

	A Secure	B Fearful	C Preoccupied	D Dismissing
r	-.210	-.298	-.372	-.180
n	108	91	44	82
p	.029	.004	.013	.105

3.4 Mediation Analyses

Mediation analyses were performed using the Sobel *z* test (Baron & Kenny, 1986). The assumptions for multiple regression analysis were checked (as this is involved in mediation analysis). Cook's D indicated that there were no multivariate outliers and inspection of a histogram suggested that there was normality of residuals. A scatterplot was generated to check for independence of residuals, no heteroscedasticity, and linearity of relationship between the predictor and predicted variables; these assumptions were met. Finally, VIF values indicated that multicollinearity was not excessive. Mediation analyses were performed for resilience, personality disorder and dimensional attachment

models[34], since this analysis can only be performed with dimensional, rather than categorical, data.

3.4.1 Model of Self

The beta coefficient between model of self and resilience was .30 ($t_{(328)} = 5.62$, $p < .001$). The relationship between resilience and personality disorder (when model of self was also entered into the regression model) was Beta = -.26 ($t_{(327)} = 4.89$, $p < .001$) and the relationship between model of self and personality disorder was beta = -.28 ($t_{(327)} = 5.40$, $p < .001$). A Sobel test revealed that levels of resilience significantly mediated the relationship between model of self and personality disorder: $z = -3.56$, $p < .001$

3.4.2 Model of Other

The beta coefficient between model of other and resilience was .11 ($t_{(328)} = 1.97$, $p = .050$). The relationship between resilience and personality disorder (when model of other was also entered into the regression model) was Beta = -.33 ($t_{(327)} = 6.26$, $p < .001$) and the relationship between model of other and

[34] Model of self and model of other

personality disorder was beta = -.13 ($t_{(327)}$ = 2.46, p = .015). A Sobel test revealed that levels of resilience did not significantly mediate the relationship between model of other and personality disorder: z = -1.84, p = .065.

4. DISCUSSION

4.1 Findings

The present study explored the interaction between resilience, attachment and personality disorder. This section will first discuss the findings in terms of the four research questions set out in the study, followed by a discussion of the implications of these findings.

4.1.1 What are the Differences in Resilience Across the Four Attachment Style Groups?

Differences across the four attachment styles were found in relation to the level of resilience. In particular, the group that appeared to be most resilient were those participants with a secure attachment, followed by dismissing, preoccupied and fearful attachments. These findings in terms of resilience seem consistent with the theory of attachment that suggests positive cognitive and emotional skills develop in the context of meaningful attachment relationships.

Furthermore, these skills are thought to equip individuals with the ability to cope with adversity, which fits with the concept of resilience.

It was apparent from the results that fearful attachment was indicative of the lowest resilience levels. As shown in the introduction section, attachment theory has characterised this attachment style with high avoidance and anxiety, and negative models of self and other (Bartholomew and Horowitz, 1991) (see Table 1). It makes theoretical sense that individuals with fearful attachment demonstrated the lowest levels of resilience as their emotional and behavioural patterns reflect more psychological distress and difficulties than the other styles. In contrast, individuals with secure attachment demonstrated the highest levels of resilience, which is consistent with the theoretical patterns of low anxiety, low avoidance and positive models of self and other (Bartholomew and Horowitz, 1991). Individuals with a dismissing style had higher levels of resilience than those with preoccupied styles. It has been stated that individuals with a dismissing attachment style tend to report having difficulties less than others or deny that their difficulties (Main et al., 1985). The tendency to under report difficulties may be explained by a negative view of others which in turn leads to lack of trust and subsequent avoidance, which are characteristics typical of a dismissing attachment style. The tendency of denying own difficulties may be explained by the positive model of self that is characteristic of such attachment style, which may have developed from experiences in which others were not available and which led these individuals to become self-reliant and to need to

maintain a positive self-image. Therefore, further research might explore whether self-reported higher levels of resilience are an accurate reflection of better coping strategies or whether they may be better explained by the individual tendency to minimise or dismiss their own difficulties.

These findings are consistent with the literature that suggests that resilience correlates negatively with attachment security (Black-Hughes & Stacy, 2013; Shibue & Kasai, 2014) and that insecure attachments relate to reduced resilience and increased vulnerability for psychological difficulties (Dodd et al., 2015). Furthermore, these findings are also consistent with the results of a study in which secure and dismissing were the two attachment styles associated with higher wellbeing (Karreman & Vingerhoets, 2012). However, in Karreman and Vingerhoets's study (2012) preoccupied was the style related to most adverse outcomes as fearful attachment was not related to wellbeing, unlike in the current study in which fearful attachment was the pattern associated with lowest resilience.

4.1.2 What are the Differences in Personality Disorder Across the Four Attachment Style Groups?

Comparable to the results on resilience, differences were found between the four groups of attachment styles (secure, preoccupied, dismissing and fearful) in

terms of personality disorder. As expected, individuals with secure attachment style demonstrated the lowest score on the personality disorder scale, followed by those with dismissing, preoccupied and fearful attachments, in that order. Therefore, the more resilient the young person was, the lower the severity and likelihood were of presenting with a personality disorder. These findings add to the growing body of evidence that associates attachment and personality disorders (Page, 2001). In particular, these findings are in line with existing research evidence that demonstrates that insecure attachment is associated with personality disorders (Bakermans-Kranenburg & van Ijzendoorn, 2009; Brennan & Shaver, 1998; Levy et al., 2015). The association found between these two contructs may be explained by their characterictics, such that attachment style represent patterns of relating to others and oneself that help individuals cope with distress and feel emotionally safe (Hamilton, 2000) whilst personality disorders are characterised by enduring patterns of ineffective interpersonal coping strategies (Eisenman, 1998).

4.1.3 What is the Association Between Resilience and Personality Disorder?

As expected from the above results, there was an inverse association between resilience and personality disorder indicating that as the levels of resilience increased, the levels of personality disorder decreased. When these two variables were examined together for each attachment group, significant relationships for resilience and personality disorder were found in each

attachment style. It was apparent that individuals with a secure attachment style presented with highest levels of resilience and lower levels of personality disorder. As the level of resilience decreased, the level of personality disorder increased, and so, a dismissing attachment style reflected lower resilience and higher personality disorder than a secure style, followed by the preoccupied style. Finally, a fearful attachment style was reflective of the lowest levels of resilience and the highest likelihood of presenting with personality disorder. The results for this research question were in concordance with those for the two previous research questions. As described above, this is consistent with the theory of attachment, which suggests that fearful attachment style represents the most distressing emotional and interpersonal patterns.

These findings confirm previous research findings in which individuals with no diagnosis of personality disorder were found to be more resilient (Paris et al., 2014). This is important for prevention and treatment of personality disorders as stronger attachment relationships have been found to be associated with positive treatment outcomes for some personality disorders and also to be more significant on the course of personality disorders than the effect of childhood maltreatment (Skodol et al., 2007).

4.1.4 Does Resilience Mediate the Association Between Dimensional Attachment Models and Personality Disorder?

Although causal relations cannot be inferred, existing theory and empirical evidence suggest that attachment is a dynamic process present in early life that influences the development of personality. The mediation model tested in this study confirmed that resilience explained part of the effect of attachment on personality disorder. In particular, the mediating effect of resilience was significant only for the effect of the model of self on personality disorder. This suggests that the quality of the internal representations of self that individuals develop may have a stronger effect than the internal representations about others in the developmental pathway of personality disorders as mediated by resilience. This was in contrast to what was expected, as it was anticipated that the mental representations that an individual has of others is also relevant to resilience as it helps individuals seek and access help. To make sense of this, it could be hypothesised that resilience share mechanisms involved in internal motivation for learning and achievements, potentially represented by the model of self, but not mechanisms involved in external motivation which may be represented by the model of other. Nevertheless, it is not possible to understand, within the current study, the reasons why resilience only mediated one pathway and future research could help address this question.

The results obtained for this research question confirm previous research that demonstrated the mediating effect of resilience between attachment style and wellbeing (Karreman and Vingerhoets, 2012).

In addition to the results obtained for the research questions presented above, further analyses in the study found unexpected results in that secure and dismissing attachment styles seemed to form a homogeneous subgroup in their relationship with resilience and personality disorder, whereas preoccupied and fearful styles formed another subgroup. This is of interest as the two subgroups share dimensional characteristics about anxiety and self, as described by attachment theory (Bartholomew & Horowitz, 1991). In particular, secure and dismissing attachment are reflective of low anxiety and a positive model of self, whereas preoccupied and fearful attachment reflect high anxiety and a negative model of self. It could be inferred that young people who experience lower anxiety and have a more positive view of themselves are able to develop higher resilience, regardless of their level of avoidant strategies and of the way in which they view others.

4.2 Implications of Findings

The results from the current study have several important implications. Firstly, as the studied variables had not been previously explored all together, this study

furthers understanding of the relationship between them. It also confirms the value of attachment theory as a framework for the understanding and research of personality disorder development. Indeed, the results obtained in this study highlight the importance of responsive and sensitive parenting and close parent-child relationships for the development of resilience as seen previously (Sapienza & Masten, 2011). The findings of this study suggest that a proportion of secondary school students within the current sample presented with personality patterns that might be classified as personality disorders, based on the scores obtained on the clinical screening measure employed. This has important implications for the role of school figures in the development of young people. School figures are particular key for young people whose caregiving environment is not able to meet their needs, since the capacity for change in attachment and caregiving systems has been demonstrated (Borden, Schultz, Herman, & Brooks, 2010; Dozier et al., 2009; Smyke, Zeanah, Fox, Nelson, & Guthrie, 2010). Moreover, schools may play an indirect, but important, role in preventing the development of personality disorders through their role in developing resilience. There is a protective role for schools in reducing the risk of young people developing personality disorders by improving their resilience and attachment styles, even for those who may have experienced adversity in childhood.

The results are consistent with recent models that propose that early attachment relationships provide a context in which further cognitive, emotional

and interpersonal abilities can develop and which, in turn, play an important role in the development of personality disorders. These models, such as those by Critchfield et al., (2008), Fonagy and Bateman (2008) and Linehan (1983), suggest that attachment styles may be insufficient on their own to explain the development of personality disorders (Crawford et al., 2006). Moreover, these findings suggest that helping young people develop a positive sense of others and self, as well as helping them develop resilience, may have a positive effect on the development of their personality. In the context of attachment theory's description of anxiety (or model of self) and avoidance (or model of other) as responses to emotional experiences, the results of the study may suggest that helping young people regulate their anxiety may have positive outcomes independent of how much they engage in avoidant strategies. Therefore, individuals with attachment styles characterised by negative representations of self and high anxiety may present with personality disorders however, they may be more able to develop resilience that contributes to an improve of functioning, as compared with individuals who have negative representation of others and high avoidance.

This further understanding of the developmental pathways of resilience and personality disorders has important implications for practice for the young people represented in the study. Previous studies have indicated the increasing incidence of mental health problems in student populations (Beamish, 2005;

Hartley, 2012; Smith et al., 2007). Addressing these difficulties is of particular relevance due to adolescence being a time of change including numerous developmental processes. Difficulties during this time can have serious consequences for adult mental health (Roisman, Masten, Coatsworth, & Tellegen, 2004). Moreover, recent government initiatives have emphasised the importance of multi-agency work with specific recommendations that schools and other organisations work together to help young people develop a better mental health (Department of Health, 2015). Thus, it is crucial that school staff continue to familiarise themselves with the current literature in this area to promote the positive development of young people and support those who experience psychological difficulties but may not seek mental health help. Lastly, it was interesting to find that young people with a dismissing attachment style demonstrated the second highest resilience levels. This has important implications for practice, as it may be that they view themselves as more resilient due to a tendency to minimise difficulties characteristic of this attachment style and this prevents them to seek out and access help from others in times of stress and difficulty. It may be of particular relevance for schools to develop skills in engaging individuals in this group and fostering positive relationships with them, as this may require more active efforts with this group than with individuals who tend to seek interaction.

Finally, with regards to treatment, the findings of this study need to be interpreted with caution, since the sample was limited to young people in secondary schools and therefore it is not possible to generalise them to other populations. However, the study confirms existing literature about attachment and personality disorders and provides an exploration of the role of resilience in mediating such a relationship. Since much of the literature on personality disorders focuses on maladaptive patterns, this study adds to the discussion of possible adaptive and effective patterns that may prevent people from developing personality disorders. It adds to the knowledge regarding developmental pathways of personality disorders, as there are still gaps in this knowledge (Crawford et al., 2006).

5. CONCLUSION

In this last section, limitations of the current study are presented followed by recommendations for future research.

5.1 Limitations

There are several limitations that should be taken into consideration when interpreting the results of this study.

5.1.1 Construct Limitations

The complex nature of the construct of resilience makes it difficult to interpret the results of the current study in the context of previous research and poses limitations for the generalisations of its results (Campbell-Sills, Forde, & Stein, 2009). For example, overcoming a threat to adaptation has sometimes been considered a criterion for the definition of resilience (Masten, & Reed, 2009). However, the definition of threat may vary. Moreover, it has been argued that most individuals may experience at least one potentially traumatic event in their lives (Kessler, Foster, & Saunders, 1995) and for this reason, the present study considered resilience a construct relevant to the general population that related to everyday stress experiences rather than only extreme stress. However, there is a risk that these results may not generalise to other research where resilience is conceptualised differently or to populations who have been exposed to severe stress or trauma. Similar to the challenges regarding the construct of resilience, attachment research has employed different methods of definition of the construct for children and adults (Bartley et al., 2006). This poses difficulties when making inferences about relationships between childhood experiences, attachment style and later social and emotional functioning.

5.1.2 Method Limitations

Reporting biases, such as social desirability and participants' emotional state, may influence self-report measures. Social desirability, however, was not assessed in the present study. Furthermore, these measures require participants' insight into their own processes and some people may employ defences such as denial when asked about difficult experiences. However, it has been suggested that there is a high convergence of results obtained from self-reported and other evaluation instruments such as interviews (Kim, Sharp & Carbone, 2014). Nevertheless, the potential limitations of self-report measures suggest that future studies might attempt to replicate these findings using other methods of assessing the variables. In addition to this, a brief categorical and dimensional measure of attachment was appropriate for the present exploratory study, however, other instruments including more complex dimensions of attachment and with higher psychometric properties would add further value.

It has been recommended that research studies including community samples should screen for participants' experiences of mental health difficulties or access to services (Thurston et al., 2008). This screening was not conducted in the current research and may have altered the nature of the sample, as some participants may have being experiencing mental heath difficulties or accessing services which would better characterise them as part of a clinical population. However, it was considered that this would be representative of the general

population in which there may be different levels of psychological problems and of seeking help. In addition to this limitation, no group for comparison was recruited for this study, which would have allowed for a comparison of results and allowed for further interpretations of findings.

Lastly, potential confounding variables were not included in the analyses and therefore not controlled for. For example, it would have been of interest to analyse the effect of age, gender and socioeconomic background. However, this was not set out for investigation and therefore not included. For this reason, the results should be interpreted with caution, as some of the conclusions drawn from the study may have been the effect of an interaction effect from other variables. Moreover, the sample of this study set a minimum age limit of 16 years old. Since school is compulsory only until this age, most participants would have made the choice to remain in education and therefore the sample may have been representative of a more resilient population. Finally, some schools requested to conduct the data collection themselves and for that reason the researcher was not present in these schools. This may have had implications in terms of standardisation of the data collection method and an increased effect of social desirability, which was not measured in the study. Moreover, there may have been an effect of selection bias in that the classes where the data collection was conducted were selected by school staff and not randomly selected.

5.2 Future research

The findings and limitations of this study point out future directions for research. First, the scarce literature of resilience in relation to personality disorders suggest that more research in this area is needed. However, the complexity of the construct of resilience poses complications for research and perhaps further agreement into the concept would be of value. Nevertheless, since this research confirms that there are variables that mediate the relationship between attachment and personality disorders, it would be of value to simplify the construct of resilience and study different components independently. This would also help explain how the developmental pathway is explained by resilience. Moreover, it would be interesting to explore resilience in the context of different personality disorders, since the present study addressed this by looking at a continuum of personality pathology rather than specific personality presentations.

In addressing some of the limitations from this study, future investigations should include a school sample of younger children to allow for comparisons with children who attend compulsory education and whether there is a difference in resilience, attachment and personality disorder in this group as compared to the sample in the present study. Secondly, longitudinal studies would further the conclusions from this research by allowing for the investigation of causal relationships between the variables. This would add to

the knowledge and understanding of the developmental pathways of resilience, as well as how resilience interacts with attachment in the development of personality disorders. Lastly, the present study focused on the general population. Further research may include clinical and at risk populations. In particular, it would be worth to conduct this study with a looked after children sample. There are several reasons for the relevance of research in this population. First, there is much higher prevalence of mental health difficulties in looked after children, 40% compared to 10 % in the general population (Public Bill Committee, 2015). Secondly, research with this population is still limited and not representative (Rees, 2013). Moreover, the National Institute of Clinical Excellence [NICE] (2010) has proposed guidelines for looked after children that specifically recommend the promotion of resilience and suggested that only 10% of looked after children are securely attached to their biological parents. Lastly, NICE guidelines (2010) highlight the importance of secure attachments for the development of looked after children and specifically recommend interventions that focus on the promotion of secure attachments. For the reasons above, it seems justified that the variables investigated in the present study are examined in the looked after children population.

It would be interesting to extend this research by examining the relationship between resilience and other factors known to have an effect on attachment and personality disorders. Some of these factors are aggression, mentalisation and

emotion dysregulation. This could help identify mechanisms that are shared between these cognitive and emotional processes and resilience and those that are unrelated. This could further benefit the understanding about the concept of resilience and its conceptualisation. On a different note, other areas of research have produced a growing body of data on how particular gene-environment interactions affect and underpin resilience (Stein, 2009). Similarly, Sarubin et al. (2015) stated that there is some evidence that supports a direct biological effect of the development on resilience, suggesting that maltreatment in childhood may have an influence on biological responses to stress. However, the interaction between biological and environmental factors requires further research.

Finally, and given the findings of the present research that indicate the importance of resilience for young people's development and wellbeing, further research is required to develop and evaluate appropriate preventative and treatment interventions to effect resilience. To conclude, this research found relevant associations between all the constructs under investigation. In addition to this, the present study highlighted that there is a clear mediating effect of resilience in the relationship between attachment and personality disorders. However, further research is required to increase our understanding of the mechanisms responsible for the development of resilience.

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CHAPTER III: REFLECTIVE PAPER

Reflections on a Developing Self

Chapter word count: 1,977
(Excluding quotations, references and tables)

1. INTRODUCTION

This paper provides a reflective account of my experience of *self* as a researcher and a developing trainee and how this fits with the themes of the thesis, especially those of personality and attachment. It will provide a consideration of the tensions that may arise between the roles of researcher and trainee. It will also provide a reflection on how my personal experiences and views may have shaped my choice of topic and approach to research. Furthermore, it will also offer an observation on how the processes of research and training have had a personal impact on myself, resulting in a continuous circular process of learning and development.

"It is in playing and only in playing that the individual child or adult is able to be creative and to use the whole personality, and it is only in being creative that the individual discovers the self." (Winnicott, 1971, p. 54)

This quote illustrates the idea that it is through exploration and creativity that an individual develops. Similarly, the theory of attachment proposes that children need a secure environment that acts as a base from which they can separate to go out and explore and to which they can go back to when they need comfort and support (Holmes, 2001). This quote will be used to illustrate how training has

acted as a base for my development and how through exploration development has taken place.

2. ENGAGING WITH REFLEXIVITY

Personal reflexivity refers to the process of reflecting on the way personal values, experiences and interests influence research (Willing, 2008). This has been differentiated from epistemological reflexivity in that the latter relates to the assumptions made during the course of research and the implications of such assumptions for interpretation of its findings (Willing, 2008). Willing (2008) adds that the process of research itself has an impact on the researcher in a personal or academic way.

2.1 Interest for research

In reflecting about my choice of research I recall having an interest in personality development since doing my undergraduate degree. I remember wondering about personality, a construct that seemed to encompass the whole of a person. I remember questioning what makes people develop in the way they do and different from each other. Later, in my first two placements of training, I recall working with some patients who presented with depression but reported a lifetime of emotional difficulties. The way they related to others and to

themselves appeared to be a source of distress and an obstacle for them to utilise their potential in life.

In considering these observations I became interested in the apparent distinction that exists in psychological services between mental health difficulties such as depression or anxiety and personality disorders. This distinction was perhaps based in the widely used Diagnostic and Statistical Manual of Mental Disorders [DSM] (American Psychiatric Association, 2013b) that, until recently, made a distinction between primary disorders, or Axis I, and personality disorders, or Axis II. However, the DSM implies that personality disorders may be related to problems in Axis I (Comer, 2014) and the comorbidity between difficulties from both Axes has been extensively documented (Adshead, Brodrick, Preston, & Deshpande, 2012). Nevertheless, this categorical approach seems to be present in the way difficulties are discussed in some services. For example, in placements during training, I have sometimes observed a stance that certain behaviours presented by some patients are 'just personality disorder'. This viewpoint seems to disregard developmental factors and emotional experiences of individuals with these difficulties. Moreover, this approach seemed to focus on behavioural and symptomatic presentations, what people *do,* and conveyed a static sense of *personality.* I recall finding surprising that this approach is present among those who support people with these complex patterns of difficulties. On reflection, I realise that it was both my interest in personality and my observations of these

viewpoints, as well as the emotional responses they evoked in me, that drove my choice of topic for research.

2.2 Approach to Research

As described above, the choice area for my research reflected my interest in personality and related difficulties. Furthermore, I wanted to contribute to developing an understanding of such difficulties that considered personal experiences and their effect on such difficulties. Thus I decided to focus my research on early interpersonal experiences that may shape the development of certain emotional and interpersonal patterns, as proposed by attachment theory (Bowlby, 1969). I believed this could promote understanding, acceptance and hope in the person experiencing difficulties as well as those supporting them, which the literature has associated with good outcomes for therapeutic change (Hubble, Duncan, & Miller, 1999). Perhaps in this endeavour, I intended to help shape services and the approach to these clinical presentations. It is on reflection that I realise that I held the assumption that findings from a quantitative study were more likely to be accepted within a predominantly medical thinking system.

2.3 *My-Self* as a Researcher

It was interesting to consider that my personal views presented above may have had an effect on the assumptions developed through the course of research and

that this may have, in turn, shaped the interpretations of findings and conclusions of research. The concept of epistemological reflexivity (Willing, 2008) provided a framework for the reflections presented in this section.

As a researcher, there was a tension between the motivation to explore and find *knowledge* from an open mind position and the hope to find the results that I expected. This is likely to have had an impact on the way I was able to make sense of the findings, therefore shaping the implications of my study. This tension between my researcher and clinician roles continued to be apparent throughout my research. As a researcher, I was focused on producing an academic piece of work that met the standards set for a doctorate. However, as a clinician I wanted to learn about these clinical presentations and understand the experiences of these individuals. These two positions seemed opposed at times and I found myself stepping back to observe my relationship with my research, adopting a role of an internal supervisor, similar to that suggested by Casement (2014). For example, when having issues with data collection I found myself wanting to achieve an appropriate sample size so the study had sufficient statistical power. However, in doing so, I had to balance the wish to increase the response rate with the risk that methodological changes could confound the data and impact on the meaning of the results. Likewise, I attempted to monitor the effect that my belief on the relationship between early interpersonal experiences and later psychological difficulties could have on the analysis and interpretation of results. These issues may have caused a biased interpretation of the results

and this raised considerations about how knowledge is constructed rather than just *found.* This led me to reflect on the value of ongoing self-supervision and supervision from others, similarly to the idea of developing through exploration but also in the context of a secure base.

Within my role as a researcher, a further conflict arose. Since the beginning of training I had struggled with the use of clinical diagnoses of disorders, especially that of personality disorders. However, in choosing a research field and becoming part of a research community I adopted the existing terminology. I realised that, in attempting to contribute to a developmental understanding of personality disorders, I may also be contributing to the use of diagnostic terminology. Moreover, the term personality disorder became very significant in narrowing the research question and selecting inclusion criteria for my literature review. The term was useful in facilitating a shared language amongst researchers. However, these dilemmas do not pertain directly the individuals presenting with such difficulties and seem to pose the question: whom do diagnoses serve a purpose for?

2.4 *My-Self* as a Trainee

The quote shown in the introduction of this paper denotes a process of being creative and discovering oneself. This is particularly relevant to my empirical paper that included an attachment model of self (Bartholomew and Horowitz,

1991), which was found to be important in the relationship between attachment and personality disorder (de Llano Arias, Pearson, Marczak, Patterson & Hume, 2016). Thus through exploration and creativity, individuals may be able to develop a positive and resilient sense of selves. However, creativity can involve struggle (Sharma & Sharma, 2004) and the availability of others is crucial in helping the individual through this process, as explained by attachment theory.

These ideas can be applied to my experiences through training. The research process and the wider clinical training have been stimulating as well as strenuous at times. I have found myself shifting from motivation and enthusiasm to emotional struggle at different times of the process. Attachment theory (Bowlby, 1969) proposes that it is mainly in times of difficulty that our attachment systems become activated. In these times, different strategies may be used to try and cope with the struggle, including seeking proximity or engaging in avoidant strategies. Gradually through training, and with the support and feedback from tutors, I have become more aware of the strategies that I adopt at different times of difficulty. Furthermore, I have found that in gaining awareness I was able to *explore* other strategies, and that my emotional and behavioural patterns began to change. This links with the practice of psychodynamic therapy in which significant relationships with others allows for integration of unconscious processes into consciousness, which eventually leads to change (Lemma, 2003). These ideas suggest that we need others to help us become aware of who we are

as well as providing us with a secure context in which we can change. This resembles the therapeutic process and what we can provide for people who access our services.

3. CONCLUSION

The reflections described above have implications for my practice and continuing development as a Clinical Psychologist. Some of these implications will be presented in this section as a conclusion of this paper.

One of the implications for practice of the topics considered in this reflective paper is the changes in mental health service and the role of Clinical Psychologists in contributing to these changes. It has been documented that the way mental health is construed is shifting (APA, 2013). It has been proposed that future directions for research include reconsidering the way in which personality disorders are classified. This proposal suggests that this new classification should further reflect the developmental histories of individuals with these presentations. Consistent with this is the practice of psychological formulations widely used in Clinical Psychology (Johnstone & Dallos, 2006). This suggests the relevant role that Clinical Psychologists may have in contributing to this research area and in shaping services.

Finally, a further consideration from the reflections presented in this paper concerns the use of the skills developed through clinical training. Throughout the Doctorate, skills like creativity and critical thinking have been actively encouraged and ultimately consolidated through conducting a research thesis. The active engagement of Clinical Psychologists in reflective and critical practice is also encouraged by the British Psychological Society (British Psychological Society, 2009). However, the reality and current context within the National Health Service, as well as the constraints posed by economic and other pressures, may not always allow for the utilisation of such skills. These pressures will raise personal and professional conflicts, however, I feel that the challenges experienced during clinical training have provided me with an experienced of this whilst helping me acquire and develop resources to manage it.

To conclude, I will reflect on the quote at the beginning of this paper. This quote described the process of finding oneself through engagement in exploration and creativity. In developing as a Clinical Psychologist, it may be that it is in the continuous exploration, and in the context of relationships with others in the profession, that I *discover* the psychologist-*self* I want to be.

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APPENDICES

Appendix 1: Author Instructions from the *Journal of Personality Disorders*

Journal of Personality Disorders

Instructions to Authors

Types of Articles

Regular Articles: Reports of original work should not normally exceed 30 pages (typed, double-lined spaces, and with standard margins, including tables, figures, and references). Occasionally, an author may feel that he or she needs to exceed this length (e.g., a report of a series of studies, or a report that would benefit from more extensive technical detail). In these circumstances, an author may submit a lengthier manuscript, but the author should describe the rationale for a submission exceeding 30 pages in the cover letter accompanying the submission. This rationale will be taken into account by the Editors, as part of the review process, in determining if the increased length is justified.

Invited Essays and Special Articles: These articles provide an overview of broad-ranging areas of research and conceptual formulations dealing with substantive theoretical issues. Reports of large-scale definitive empirical studies may also be submitted. Articles should not exceed 40 pages including tables, figures, and references. Authors contemplating such an article are advised to contact the editor in advance to see whether the topic is appropriate and whether other articles in this topic are planned.

Brief Reports: Short descriptions of empirical studies not exceeding 20 pages in length including tables, figures, and references.

Web-Based Submissions: Manuscripts must be produced electronically using word processing software, double spaced, and submitted along with a cover letter to http://jpd.msubmit.net. Authors may choose blind or non-blind review. Please specify which option you are choosing in your cover letter. If you choose blind review, please prepare the manuscript accordingly (e.g., remove identifying information from the first page of the manuscript, etc.). All articles should be prepared in accordance with the *Publication Manual of the American Psychological Association*. They must be preceded by a brief abstract and adhere to APA referencing format.

Tables should be submitted in Excel. Tables formatted in Microsoft Word's Table function are also acceptable. (Tables should not be submitted using tabs, returns, or spaces as formatting tools.)

Figures must be submitted separately as graphic files (in order of preference: tif, eps, jpg, bmp, gif; note that PowerPoint is not acceptable) in the highest possible resolution. Figure caption text should be included in the article's Microsoft Word file. All figures must be readable in black and white.

Permissions: Contributors are responsible for obtaining permission from copyright owners if they use an illustration, table, or lengthy quote (100+ words) that has been

published elsewhere. Contributors should write both the publisher and author of such material, requesting nonexclusive world rights in all languages for use in the article and in all future editions of it.

References: Authors should consult the publication manual of the American Psychological Association for rules on format and style. All research papers submitted to the *Journal of Personality Disorders* must conform to the ethical standards of the American Psychological Association. Articles should be written in nonsexist language. **Any manuscripts with references that are incorrectly formatted will be returned by the publisher for revision**.

Sample References:

Davis, C. G., & McKearney, J. M. (2003). How do people grow from their experience with trauma or loss? *Journal of Social & Clinical Psychology*, *22*(5), 477-492.

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Roelofs, J., Meesters, C., Ter Huurne, M., Bamelis, L., & Muris, P. (2006). On the links between attachment style, parental rearing behaviors, and internalizing and externalizing problems in nonclinical children. *Journal of Child and Family Studies*, *15*, 331-344.

Appendix 2: Quality Assessment Framework, adapted from Caldwell, Henshaw, & Taylor (2011)

Quality Assessment Item / **Author & year**	Cicchetti et al., 2014	Crawford et al., 2009	Crawford et al., 2006	Deborde et al., 2012	Fossati et al., 2011	Fossati et al., 2014	Kim et al., 2014	Nakash-Eisikovits et al., 2002	Ramos et al., 2014	Rosenstein & Horowitz, 1996	Sharp et al., 2015
1. Title reflecting the content?	2	2	2	2	2	2	2	2	2	1	2
2. Authors credible?	2	2	2	2	2	2	2	2	2	2	2
3. Abstract summarising the key components?	2	1	1	2	1	2	1	2	2	1	2
4. Rationale for research clearly outlined?	2	1	2	2	2	2	2	2	1	1	2
5. Literature review comprehensive & up-to-date?	2	2	2	2	2	2	2	2	2	2	2
6. Aim of the research clearly stated?	2	1	2	2	2	2	2	2	2	2	2
7. Ethical issues identified and addressed?	1	1	1	2	1	2	2	0	2	1	2
8. Methodology identified and justified?	1	1	1	1	1	1	1	2	1	1	1
9. Study design clearly identified and rationale evident?	1	1	1	1	1	1	1	2	1	1	1
10. Hypothesis clearly stated and variables defined?	2	1	2	2	2	2	2	1	1	2	2
11. Population identified?	2	2	2	2	2	2	2	2	2	2	2
12. Sample adequately described and reflective of population?	2	1	1	1	2	2	2	2	2	2	2
13. Method of data collection valid and reliable?	2	2	2	2	2	2	2	2	2	2	2
14. Method of data analysis valid and reliable?	1	1	1	2	2	2	1	2	2	1	1
15. Results presented appropriately and clearly?	1	2	2	2	1	1	2	2	2	2	2
16. Discussion comprehensive?	2	2	2	2	2	2	2	2	2	2	2
17. Conclusion comprehensive?	0	2	2	2	2	1	1	2	1	1	1
Total Score (out of 36)	27	25	28	31	29	30	29	31	29	26	30
Percentage	75%	69%	78%	86%	81%	83%	81%	86%	81%	72%	83%

Appendix 3: Author Instructions from the *Journal of Research on Adolescence*

Author Guidelines

JRA NOTICE TO CONTRIBUTORS

Journal of Research on Adolescence
The Official Journal of the Society for Research on Adolescence

Editorial Scope
Multidisciplinary in scope, this compelling journal is designed to significantly advance knowledge about the second decade of life. Employing a diverse array of methodologies, it publishes original research that includes intensive measurement, multivariate-longitudinal, and animal comparative studies; demographic and ethnographic analyses; and laboratory experiments. Articles pertinent to the variety of developmental patterns inherent throughout adolescence are featured including cross-national and cross-cultural studies, systematic studies of psychopathology, as well as those pertinent to gender, ethnic, and racial diversity.

Audience
Clinical, social, and developmental psychologists, sociologists, social workers, and those specializing in family studies.

Online publication from 2016
Effective with the 2016 volume, the *Journal of Research on Adolescence* will be published in an online-only format. This transition will reduce the environmental impact caused by the production and distribution of printed journal copies and will allow the journal to expand the number of journal pages, include color images, and reach out to a broader scientific and lay audience. Published articles will continue to be disseminated quickly through the journal's broad network of indexing services and discoverable through popular search engines such as Google. All color images will now be reproduced digitally and published free of charge.

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Types of Manuscripts
The *Journal of Research on Adolescence* considers only original manuscripts in formats described below. Inquiries concerning alternative formats should be addressed to the Editor prior to submission. All submissions are expected to be no more than 40 manuscript pages, including tables, references, and figures (but excluding appendices). Authors are strongly encouraged to submit concise and focused papers in the 25-30 page range. All manuscripts must be written in English and strictly adhere to APA Style (6th edition).

Empirical articles comprise the major portion of the journal. To be accepted, empirical articles must be judged as being high in scientific quality, contributing to the empirical base of adolescent development, and having important theoretical, practical, or interdisciplinary implications. Reports of multiple studies, methods, or settings are encouraged, but single-study reports are also considered. Longitudinal studies are encouraged, but important and novel studies using cross-sectional data will be considered.

Brief reports are reserved for short cutting-edge empirical papers that are no longer than 4000 words in length (approximately 15 pages, including ALL text, tables, footnotes, appendices), that advance research and knowledge in an area through noteworthy findings and/or new methods. For manuscripts that require longer descriptions of methods and results, authors should use the empirical article format.

Reviews focus on past empirical and/or on conceptual and theoretical work. They are expected to synthesize or evaluate a topic or issue relevant to adolescent development, should appeal to a broad audience, and may be followed by a small number of solicited commentaries.

Special issues and/or *special sections* devoted to a focused theme relevant to adolescent development also will be considered. Authors interested in proposing a special issue should submit a two-page proposal to the Editor describing the focus, justification, types of articles to be solicited, and potential contribution to the field.

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Regulations
Only original manuscripts, written in English, are considered. The corresponding author for a manuscript must, in an accompanying cover letter, warrant that all co-authors are in agreement with the content of the manuscript and that the study was conducted in accordance with the ethical standards of the American Psychological Association. Authors should also state that the findings reported in the manuscript have not been published previously and that the manuscript is not being simultaneously submitted elsewhere. Upon acceptance, the authors are required to sign a publication agreement transferring the copyright from the author to the Society for Research on Adolescence. Accepted manuscripts become the permanent property of the journal. A statement of Editorial Policy appeared in Volume 1, Number 1.

Manuscript Review
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A system of blind reviewing is used. It is the author's responsibility to remove information about the identity of the author(s) and affiliation(s) from the manuscript; such information should appear on the cover sheet. The cover sheet will not be included when a manuscript is sent out for review. The Board member responsible for a manuscript will have the discretion to integrate solicited review with the member's own opinions and recommendations into a determinative response. The Editor retains the right to reject manuscripts that do not meet established ethical standards. The Publications Officer regrets that, in case of rejection, manuscripts cannot be returned.

There is no charge for publication in the *Journal of Research on Adolescence* unless tabular or graphic materials exceed 10% of the total number of pages. Charges are also levied for changes in proof other than correction of printer's errors. Any inquiries relating to business matters (including reprint orders) should be addressed to the publisher:

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Author Services enables authors to track their article — once it has been accepted — through the production process to publication online. Authors can check the status of their articles online and choose to receive automated e-mails at key stages of production. The author will receive an e-mail with a unique link that enables them to register and have their article automatically added to the system. Please ensure that a complete e-mail address is provided when submitting the manuscript. Upon publication, corresponding authors can collect a gratis PDF offprint of their article from Author Services. Visit http://authorservices.wiley.com/bauthor/ for more details on online production tracking and for a wealth of resources including FAQs and tips on article preparation, submission, and more.

Appendix 4: The Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003)

Connor-Davidson Resilience Scale 25 (CD-RISC-25) ©

initials ☐☐☐ *ID#* ☐☐☐☐☐☐☐ *date* ☐☐/☐☐/☐☐☐☐ *visit* ☐☐ *age* ☐☐

*For each item, please mark an "**x**" in the box below that best indicates how much you agree with the following statements as they apply to you over the last **month**. If a particular situation has not occurred recently, answer according to how you think you would have felt.*

		not true at all (0)	rarely true (1)	sometimes true (2)	often true (3)	true nearly all the time (4)
1.	I am able to adapt when changes occur.	☐	☐	☐	☐	☐
2.	I have at least one close and secure relationship that helps me when I am stressed.	☐	☐	☐	☐	☐
3.	When there are no clear solutions to my problems, sometimes fate or God can help.	☐	☐	☐	☐	☐
4.	I can deal with whatever comes my way.	☐	☐	☐	☐	☐
5.	Past successes give me confidence in dealing with new challenges and difficulties.	☐	☐	☐	☐	☐
6.	I try to see the humorous side of things when I am faced with problems.	☐	☐	☐	☐	☐
7.	Having to cope with stress can make me stronger.	☐	☐	☐	☐	☐
8.	I tend to bounce back after illness, injury, or other hardships.	☐	☐	☐	☐	☐
9.	Good or bad, I believe that most things happen for a reason.	☐	☐	☐	☐	☐
10.	I give my best effort no matter what the outcome may be.	☐	☐	☐	☐	☐
11.	I believe I can achieve my goals, even if there are obstacles.	☐	☐	☐	☐	☐
12.	Even when things look hopeless, I don't give up.	☐	☐	☐	☐	☐
13.	During times of stress/crisis, I know where to turn for help.	☐	☐	☐	☐	☐
14.	Under pressure, I stay focused and think clearly.	☐	☐	☐	☐	☐
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	☐	☐	☐	☐	☐
16.	I am not easily discouraged by failure.	☐	☐	☐	☐	☐
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.	☐	☐	☐	☐	☐
18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	☐	☐	☐	☐	☐
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	☐	☐	☐	☐	☐
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	☐	☐	☐	☐	☐
21.	I have a strong sense of purpose in life.	☐	☐	☐	☐	☐
22.	I feel in control of my life.	☐	☐	☐	☐	☐
23.	I like challenges.	☐	☐	☐	☐	☐
24.	I work to attain my goals no matter what roadblocks I encounter along the way.	☐	☐	☐	☐	☐
25.	I take pride in my achievements.	☐	☐	☐	☐	☐

01-01-15

Appendix 5: The Relationships Questionnaire (RQ) (Bartholomew & Horowitz, 1991)

Questionnaire 2

Following are four relationship styles that people often report. Place a checkmark next to the letter corresponding to the style that best describes you or is closest to the way you are.

_____ A. It is easy for me to become emotionally close to others. I am comfortable depending on them and having them depend on me. I don't worry about being alone or having others not accept me.

_____ B. I am uncomfortable getting close to others. I want emotionally close relationships, but I find it difficult to trust others completely, or to depend on them. I worry that I will be hurt if I allow myself to become too close to others.

_____ C. I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like. I am comfortable being without close relationships, but I sometimes worry that others don't value me as much as I value them.

_____ D. I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or to have others depend on me.

Now please rate each of the relationship styles above to indicate how well or poorly each description corresponds to your general relationship style.

Style A

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style B

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style C

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Style D

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

Appendix 6: Self-administered-Standardised Assessment of Personality-Abbreviated Scale SA-SAPAS (Merlhiot et al., 2014)

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Questionnaire 1

This questionnaire is about how you behave and the way you think and feel things usually, in general. Please read each question carefully and circle only one answer for each question.

1- In general, do you have difficulty making and keeping friends?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
2- Would you normally describe yourself as a loner?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
3- In general, do you trust other people?	Yes / No
If the answer is no, does this apply "most of the time" and in "most of situations"?	Yes / No
4- Do you normally lose your temper easily?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
5- Are you normally an impulsive sort of person?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
6- Are you normally a worrier?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
7- In general, do you depend on others a lot?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No
8- In general, are you a perfectionist?	Yes / No
If the answer is yes, does this apply "most of the time" and in "most of situations"?	Yes / No

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Head of Department of Psychology
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Appendix 7: Demographics Form

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Coventry University

Demographic Information (school) v 2.0

Study Title: A Quantitative Study of the Relationship between Resilience, Attachment and Personality with Young People

Date: ___ / ___ / _____ **Your age in years: _____**

We would appreciate it if you could tell us a little about yourself

Please tick the appropriate box

Your Gender: Male ☐ Female ☐

Your Ethnicity:

A White
- ☐ British
- ☐ Any Other White background, *please write in*

_____

B Mixed
- ☐ White and Black Caribbean
- ☐ White and Black African
- ☐ White and Asian
- ☐ Any Other Mixed background, *please write in*

_____

C Asian or Asian British
- ☐ Indian
- ☐ Pakistani
- ☐ Bangladeshi
- ☐ Any Other Asian background, *please write in*

_____

D Black or Black British
- ☐ Caribbean
- ☐ African
- ☐ Any Other Black background, *please write in*

_____

E Chinese or other ethnic group
- ☐ Chinese
- ☐ Any Other, *please write in*

_____

Thank you for taking the time to complete this form.

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Appendix 8: Coventry University Ethics Certificate

Certificate of Ethical Approval

Applicant:

Cristina de Llano Arias

Project Title:

Resilience, attachment style and personality disorders: a comparative study of young people looked after by a local authority and a control group of secondary school students.

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

07 January 2016

Project Reference Number:

P33230

Appendix 9: Recruitment letter for schools

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Gatekeeper E-mail/Letter v 2.0

Date

Secondary School

Study Title: A Quantitative Study of the Relationship between Resilience, Attachment and Personality with Young People

Dear Head Teacher,

My name is Cristina de Llano Arias and I am currently conducting a research project for my Doctorate in Clinical Psychology at Coventry University. The project has been reviewed and approved by Coventry University Research Ethics Committee and Social Care Ethics Research Committee. I am writing to ask you if you would be interested in the study and would grant your permission to access your school.

Purpose of the study

Resilience has been defined as the capacity to overcome difficulties and cope with life stressors. Interventions that promote the development of resilience have become increasingly recognised as important for individuals' mental health and wellbeing. It has been recognised that attachment styles and internal working models of relationships, that are believed to originate through early relationships in life, are significantly associated with resilience. It is also believed that early attachment relationships are related to the development of maladaptive patterns of coping strategies, relationships and behaviour that may present as personality disorders later in adulthood.

Looked after children are more likely to have been exposed to adverse life experiences and trauma than their peers. Despite the high prevalence of mental health difficulties and poor life outcomes in looked after children, research in this population is still limited and not representative, especially in comparison to young people who have not been in care. The relationship between the variables proposed in this study has not been previously studied in the population of looked after children. It is expected that this study will add to the scarce literature regarding factors that contribute to the development of resilience in young people who are, or have been in care, compared with a control group. It is anticipated that it will help identify needs in this population which may help improve support and services for this group.

What's involved in the study?

The study will involve young people aged 16+, who will complete 3 brief questionnaires and a demographics form. This should take 15 minutes and can be conducted at a convenient time and date to be arranged.

Please turn over

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Head of Department of Psychology
Professor James Tresilian BSc PhD University of Warwick Coventry CV4 7AL Tel 024 7657 3009

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If you are happy to consider being involved I will describe the project in further detail at a time and place convenient for you. Please contact me by email: dellanoc@uni.coventry.ac.uk

Yours sincerely

Cristina de Llano Arias (Trainee Clinical Psychologist)

Appendix 10: Participants Information Sheet

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Coventry University

Participant Information Sheet (school) v 4.0

Study Title: A Quantitative Study of the Relationship between Resilience, Attachment and Personality with Young People

Dear Sir or Madam,

We would like to invite you to take part in a study conducted in Coventry University as part of a Doctorate in Clinical Psychology. This study has been approved by Coventry University Ethics Research Committee. Thank you for taking the time to read the following information. Please ask us if you have any questions.

What is the purpose of the study?
We are interested in understanding more about the factors that help young people develop resilience. Resilience has been described as the capacity to overcome difficulties, cope with stressors and adapt to changes. In particular, we are interested in the influence that attachment styles and personality may have in the development of resilience. We expect that the findings from the study can help improve support and services for young people with a focus on promotion of resilience and wellbeing.

Do I have to take part?
Participation is voluntary, so it is up to you to decide to take part in the study. We will describe the study and go through this information sheet with you and we will answer any questions you may have. If you agree to take part, we will then ask you to sign a consent form. You are free to withdraw at any time up until 22nd April 2016, without giving a reason or this affecting your rights or access to services. If you wish to withdraw, your details and the information you have provided will be destroyed.

What will the research involve?
If you decide to take part in the research, we will ask you to complete three brief questionnaires which ask general questions about yourself, your relationships style and the way you respond to general stress. We will also ask you to complete a short form of information such as gender and age. All of this should take approximately 15 minutes to complete.

Will the study be confidential?
Any questions you complete and anything you say is confidential unless you tell us something that suggests that you or someone else is at risk of harm. We would discuss this with you before telling anyone else. Identifiable information will only be recorded in the consent form and this will be kept separately from your responses so that your name is not connected to the results. Your responses will be given a numerical code so that if you wish to withdraw we can identify your forms and destroy your data. All information that you provide will be securely stored in locked cupboards and password protected devices and only the research team will have access to it. The data will be analysed statistically to explore the relationship between the variable in the study.

What are the benefits and risks of taking part?
Although taking part may not benefit you personally, it may help to improve local services and support for other young people. The questionnaires focus on general topics and we do not anticipate that they will cause you distress. However, if you are distressed by anything discussed during our meeting you can get support from the researcher or a member of your team. You can also contact independent support organisations such as:

Mind offers information and advice on a wide range of mental health problems.
Phone: 0300 123 3393. Website: www.mind.org.uk
YoungMinds is a charity committed to improving the emotional wellbeing and mental health of children and young people.
Phone: 020 7089 5050. Website: www.youngminds.org.uk
Get Connected is a confidential helpline service for young people under 25 who need help but do not know where to access it.
Phone: 0808 808 4994. Website: www.getconnected.org.uk
The Health Research Authority (HRA) provides independent information about research.
Phone: 020 797 22545. Website: www.hra.nhs.uk

What happens after the study?
The findings from the study will be written up as part of a thesis for the Doctorate in Clinical Psychology. They may also be published in a scientific or research forum. We will ensure that no names or identifiable information is included in the research write up and any other professional dissemination of the results. If you are interested in the outcomes of the study, your organisation will have available copies of the summary of findings that you can obtain by requesting one. This will be available from August 2016. After the study, your data will be securely stored in Coventry University for 5 years and then destroyed.

What if I want to make a complaint?
This study will be conducted to the highest standard of professionalism, however if you feel that any part or conduct is felt inappropriate, then please forward complaints to:
Prof Ian Marshall, DVC Office, Coventry University
Ian.marshall@coventry.ac.uk
Alternatively, send any queries to:
Dr Lesley Pearson, Academic Supervisor, Coventry University
lesley.pearson@coventry.ac.uk
Tel. 024 7765 8328

Research team contact details
If you would like further information about the study, you can contact:

- Cristina de Llano Arias, Chief Investigator and Trainee Clinical Psychologist dellanoc@uni.coventry.ac.uk
- Dr Lesley Pearson, Senior Lecturer in Clinical Psychology (Coventry University) lesley.pearson@coventry.ac.uk

Thank you for taking the time to read this information.
Cristina de Llano Arias
Trainee Clinical Psychologist

Appendix 11: Additional Support Sheet

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Additional Support Sheet v 4.0

Study Title: A Quantitative Study of the Relationship between Resilience, Attachment and Personality with Young People

Dear Sir or Madam,

Thank you for taking part in this study. Now that you have completed the questionnaires there is some more information in this page that you may find useful.

What do I do if I change my mind about the study?
You are free to withdraw at any time up until 22nd April 2016, without giving a reason or this affecting your rights or access to services. If you wish to withdraw, your details and the information you have provided will be destroyed.

What happens now?
After the data is analysed, the findings from the study will be written up as part of a thesis for the Doctorate in Clinical Psychology. They may also be published in a scientific or research forum. We will ensure that no names or identifiable information is included in the research write up and any other professional dissemination of the results. If you are interested in the outcomes of the study, your organisation will have available copies of the summary of findings that you can obtain by requesting one. This will be available from August 2016. After the study, your data will be securely stored in Coventry University for 5 years and then destroyed.

Where can I get support if I feel distressed about the study?
If you are distressed about the study you can get support from the researcher or a member of your team. You can also contact independent support organisations such as:
Mind offers information and advice on a wide range of mental health problems.
Phone: 0300 123 3393. Website: www.mind.org.uk
YoungMinds is a charity committed to improving the emotional wellbeing and mental health of children and young people.
Phone: **020 7089 5050. Website: www.youngminds.org.uk**
Get Connected is a confidential helpline service for young people under 25 who need help but do not know where to access it.
Phone: **0808 808 4994. Website:** www.getconnected.org.uk
The Health Research Authority (HRA) provides independent information about research.
Phone: 020 797 22545. Website: www.hra.nhs.uk

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Appendix 12: Consent Form

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Coventry University

Informed Consent Form v 4.0

Study Title: A Quantitative Study of the Relationship between Resilience, Attachment and Personality with Young People

Brief Summary of the Study
This study aims to explore the relationship between resilience, attachment and personality with young people. Participation is voluntary and you have the right to withdraw at any time until 22nd April 2016 if you change your mind. The study involves completing three brief questionnaires and a demographic information form and this should take 15 minutes in total. The data will be analysed statistically and no identifiable information will be included in the results. You can have a copy of the summary of the results by requesting it from your organisation. Thank you for your time.

	Please initial appropriate box YES	NO
1. I confirm that I have read and understood the participant information sheet (v4.0). I have had the opportunity to consider the information and ask questions that have been answered satisfactorily	☐	☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason, without my access to services or legal rights being affected	☐	☐
3. I understand that I also have the right to change my mind about participating in the study for a short period after the study has concluded (until 22nd April 2016)	☐	☐
4. I understand that all the information I provide will be treated in confidence	☐	☐
5. I agree to take part in the research project	☐	☐

Name of participant: .....

Signature of participant: .....

Date: .....

Name of researcher:.....

Signature of researcher: .....

Date: .....

Appendix 13: Data Output for Resilience and Attachment

One-way ANOVA with tests of assumptions

Relationship style self reported

Tests of Normality

	Relationship style self reported	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Resilience assessment question total scale	A	.079	108	.091	.987	108	.396
	B	.060	91	.200*	.989	91	.615
	C	.070	44	.200*	.959	44	.124
	D	.079	82	.094	.926	82	.398

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Oneway

Test of Homogeneity of Variances

Resilience assessment question total scale

Levene Statistic	df1	df2	Sig.
1.450	3	321	.228

ANOVA

Resilience assessment question total scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7170.490	3	2390.163	14.185	.000
Within Groups	54088.599	321	168.500		
Total	61259.089	324			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Resilience assessment question total scale

Tukey HSD

(I) Relationship style self reported	(J) Relationship style self reported	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	B	11.113*	1.847	.000	6.34	15.88
	C	9.380*	2.322	.000	3.38	15.38
	D	3.288	1.901	.310	-1.62	8.20
B	A	-11.113*	1.847	.000	-15.88	-6.34
	C	-1.734	2.384	.886	-7.89	4.42
	D	-7.825*	1.976	.001	-12.93	-2.72
C	A	-9.380*	2.322	.000	-15.38	-3.38
	B	1.734	2.384	.886	-4.42	7.89
	D	-6.091	2.426	.060	-12.36	.17
D	A	-3.288	1.901	.310	-8.20	1.62
	B	7.825*	1.976	.001	2.72	12.93
	C	6.091	2.426	.060	-.17	12.36

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Resilience assessment question total scale

Tukey HSD[a,b]

Relationship style self reported	N	Subset for alpha = 0.05	
		1	2
B	91	55.52	
C	44	57.25	
D	82		63.34
A	108		66.63
Sig.		.853	.424

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 72.502.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Relationship style self reported

Tests of Normality

	Relationship style self reported	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Personality disorder assessment total	A	.079	108	.097	.817	108	.000
	B	.080	91	.099	.934	91	.000
	C	.730	44	.078	.931	44	.011
	D	.750	82	.084	.845	82	.000

a. Lilliefors Significance Correction

Oneway

Test of Homogeneity of Variances

Personality disorder assessment total

Levene Statistic	df1	df2	Sig.
1.320	3	321	.001

ANOVA

Personality disorder assessment total

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	100.064	3	33.355	17.128	.320
Within Groups	625.093	321	1.947		
Total	725.157	324			

Post Hoc Tests

Multiple Comparisons

Dependent Variable: Personality disorder assessment total

Tukey HSD

(I) Relationship style self reported	(J) Relationship style self reported	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
A	B	-1.346*	.199	.000	-1.86	-.83
	C	-.995*	.250	.000	-1.64	-.35
	D	-.387	.204	.233	-.91	.14
B	A	1.346*	.199	.000	.83	1.86
	C	.351	.256	.519	-.31	1.01
	D	.959*	.212	.000	.41	1.51
C	A	.995*	.250	.000	.35	1.64
	B	-.351	.256	.519	-1.01	.31
	D	.608	.261	.093	-.07	1.28
D	A	.387	.204	.233	-.14	.91
	B	-.959*	.212	.000	-1.51	-.41
	C	-.608	.261	.093	-1.28	.07

*. The mean difference is significant at the 0.05 level.

Homogeneous Subsets

Personality disorder assessment total

Tukey HSD[a,b]

Relationship style self reported	N	Subset for alpha = 0.05	
		1	2
A	108	1.03	
D	82	1.41	
C	44		2.02
B	91		2.37
Sig.		.342	.430

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 72.502.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Appendix 15: Data Output for Mediation Analysis with Resilience Mediating the Relationship Between Model of Self and Personality Disorder

Regression analyses for Mediation Analysis

Descriptive Statistics

	Mean	Std. Deviation	N
Resilience assessment question total scale	61.28	13.762	343
MS	.9394	3.93518	330

Correlations

		Resilience assessment question total scale	MS
Pearson Correlation	Resilience assessment question total scale	1.000	.297
	MS	.297	1.000
Sig. (1-tailed)	Resilience assessment question total scale	.	.000
	MS	.000	.
N	Resilience assessment question total scale	343	330
	MS	330	330

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	MS[b]	.	Enter

a. Dependent Variable: Resilience assessment question total scale

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.297[a]	.088	.085	13.163

a. Predictors: (Constant), MS

b. Dependent Variable: Resilience assessment question total scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5478.609	1	5478.609	31.620	.000[b]
	Residual	56830.036	328	173.262		
	Total	62308.644	329			

a. Dependent Variable: Resilience assessment question total scale

b. Predictors: (Constant), MS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	Constant	60.303	.745		80.942	.000		
	MS	1.037	.184	.297	5.623	.000	1.000	1.000

a. Dependent Variable: Resilience assessment question total scale

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	MS
1	1	1.233	1.000	.38	.38
	2	.767	1.267	.62	.62

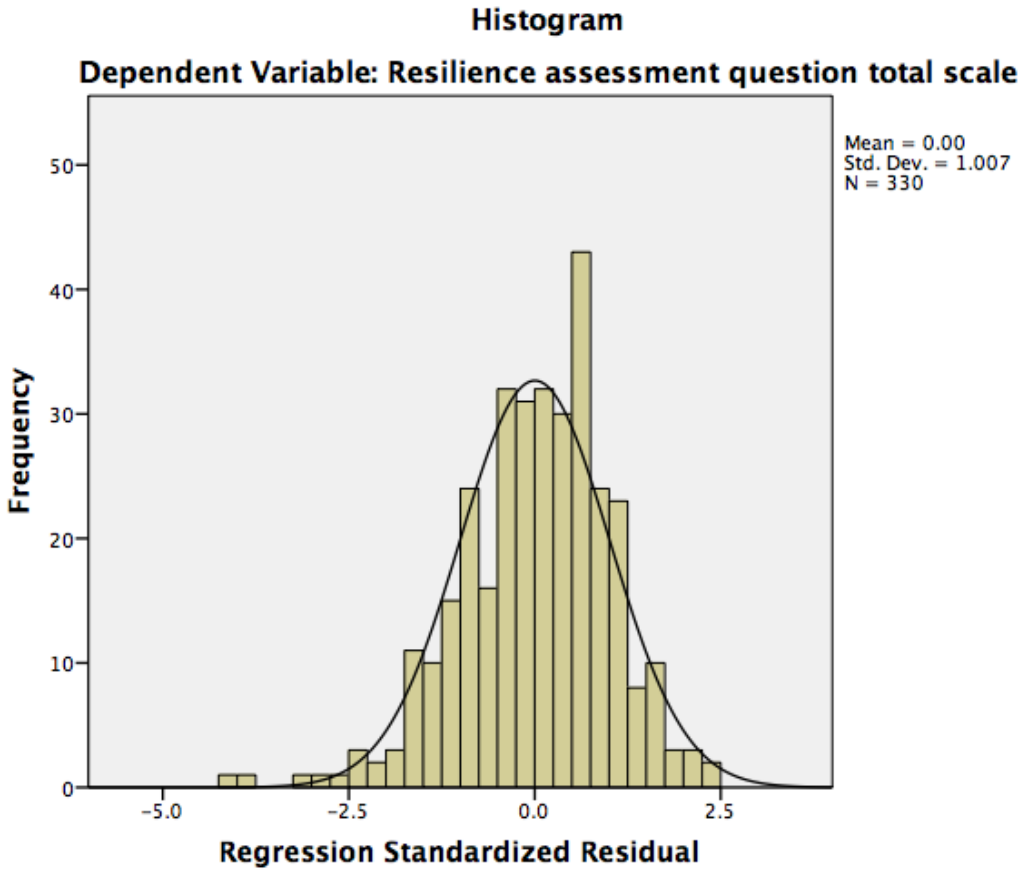
a. Dependent Variable: Resilience assessment question total scale

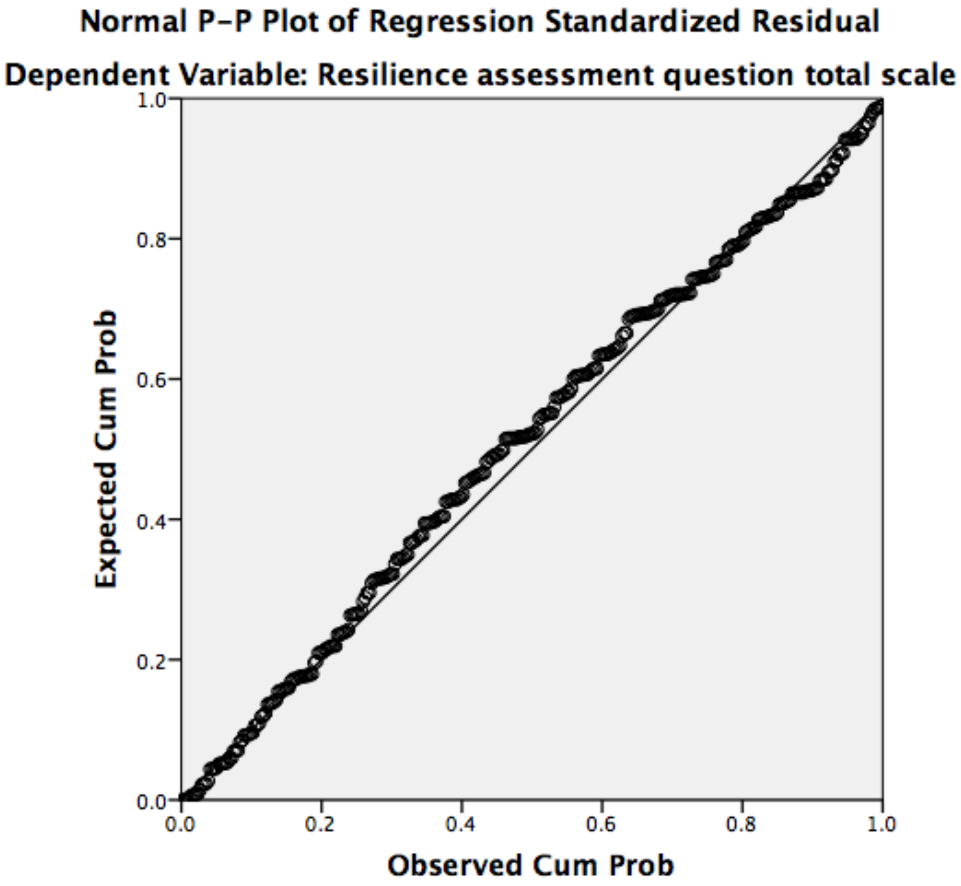
Residuals Statistics[a]

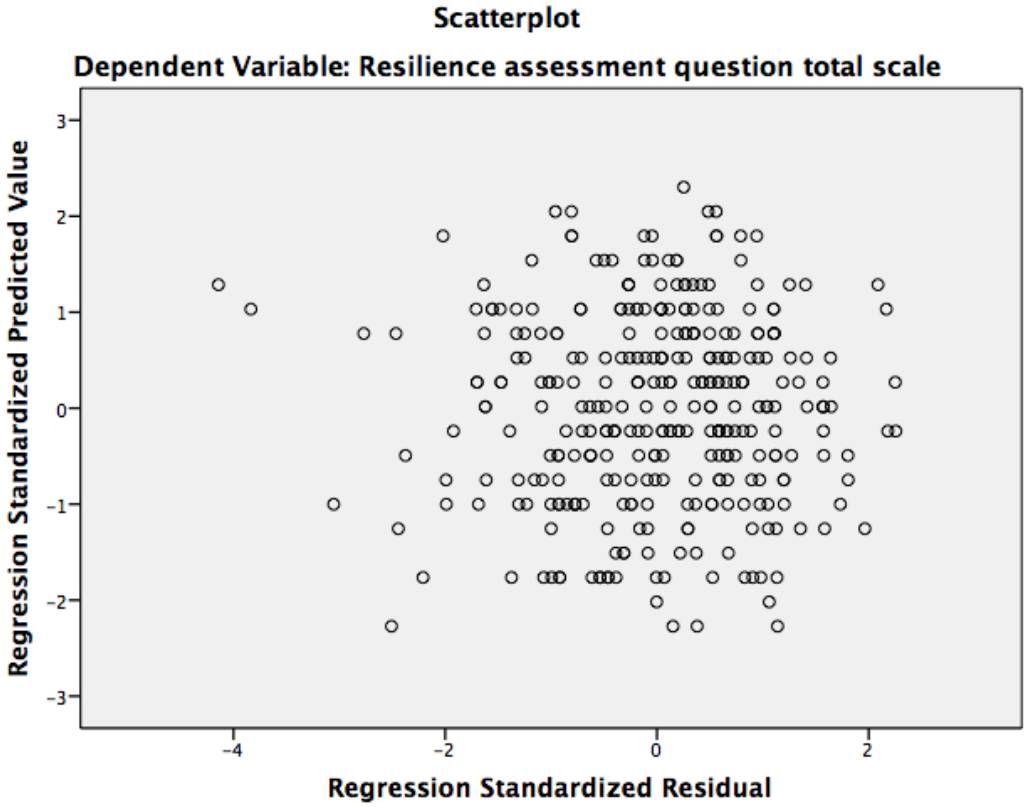
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	52.01	70.67	61.28	4.081	330
Std. Predicted Value	-2.272	2.302	.000	1.000	330
Standard Error of Predicted Value	.725	1.821	.990	.265	330
Adjusted Predicted Value	51.72	70.61	61.28	4.080	330
Residual	-54.525	29.697	.023	13.257	330
Std. Residual	-4.142	2.256	.002	1.007	330
Stud. Residual	-4.159	2.260	.002	1.010	330
Deleted Residual	-54.968	29.793	.019	13.338	330
Stud. Deleted Residual	-4.267	2.274	.001	1.015	330
Mahal. Distance	.000	5.301	.997	1.152	330
Cook's Distance	.000	.070	.003	.007	330
Centered Leverage Value	.000	.016	.003	.004	330

a. Dependent Variable: Resilience assessment question total scale

Charts


Histogram
Dependent Variable: Resilience assessment question total scale
Mean = 0.00
Std. Dev. = 1.007
N = 330
Frequency
50
40
30
20
10
0
-5.0
-2.5
0.0
2.5
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Resilience assessment question total scale
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0



Regression

Descriptive Statistics

	Mean	Std. Deviation	N
Personality disorder assessment total	1.66	1.509	343
MS	.9394	3.93518	330
Resilience assessment question total scale	61.28	13.762	343

Correlations

		Personality disorder assessment total	MS	Resilience assessment question total scale
Pearson Correlation	Personality disorder assessment total	1.000	-.357	-.329
	MS	-.357	1.000	.297
	Resilience assessment question total scale	-.329	.297	1.000
Sig. (1-tailed)	Personality disorder assessment total	.	.000	.000
	MS	.000	.	.000
	Resilience assessment question total scale	.000	.000	.
N	Personality disorder assessment total	343	330	343
	MS	330	330	330
	Resilience assessment question total scale	343	330	343

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Resilience assessment question total scale, MS[b]	.	Enter

a. Dependent Variable: Personality disorder assessment total

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.427[a]	.182	.177	1.369

a. Predictors: (Constant), Resilience assessment question total scale, MS

b. Dependent Variable: Personality disorder assessment total

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	136.374	2	68.187	36.405	.000[b]
	Residual	612.479	327	1.873		
	Total	748.853	329			

a. Dependent Variable: Personality disorder assessment total

b. Predictors: (Constant), Resilience assessment question total scale, MS

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.408	.355		9.607	.000		
	MS	-.109	.020	-.285	-5.441	.000	.912	1.096
	Resilience assessment question total scale	-.027	.006	-.244	-4.664	.000	.912	1.096

a. Dependent Variable: Personality disorder assessment total

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MS	Resilience assessment question total scale
1	1	2.100	1.000	.01	.04	.01
	2	.878	1.547	.00	.88	.00
	3	.022	9.680	.99	.08	.99

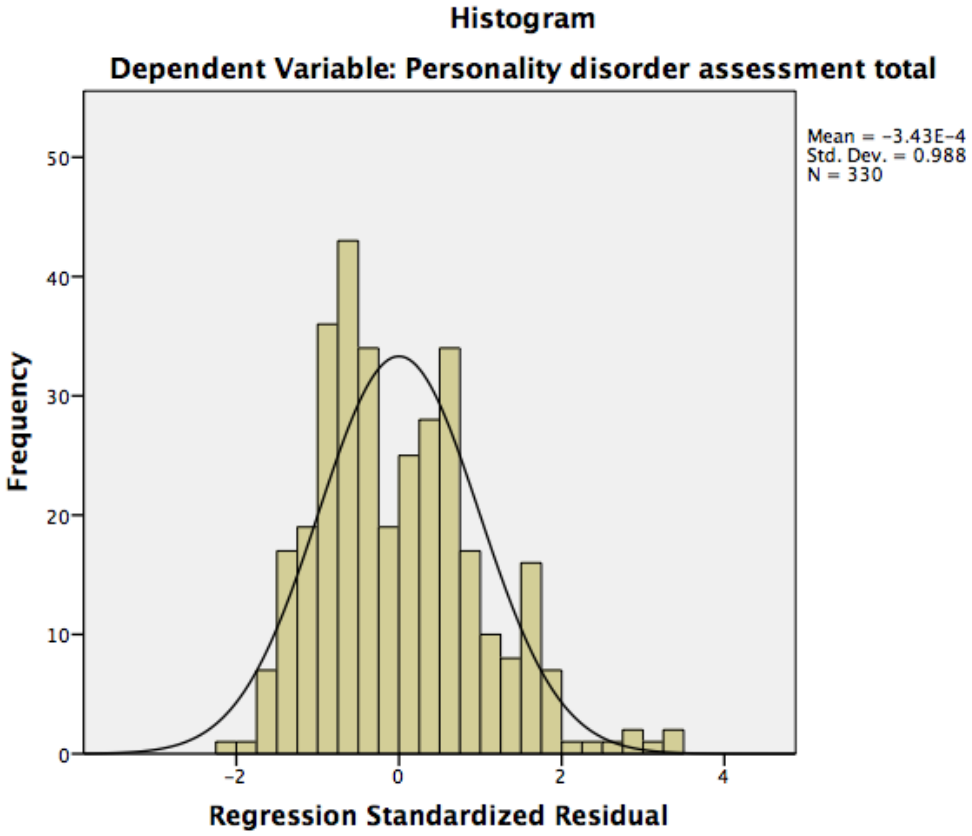
a. Dependent Variable: Personality disorder assessment total

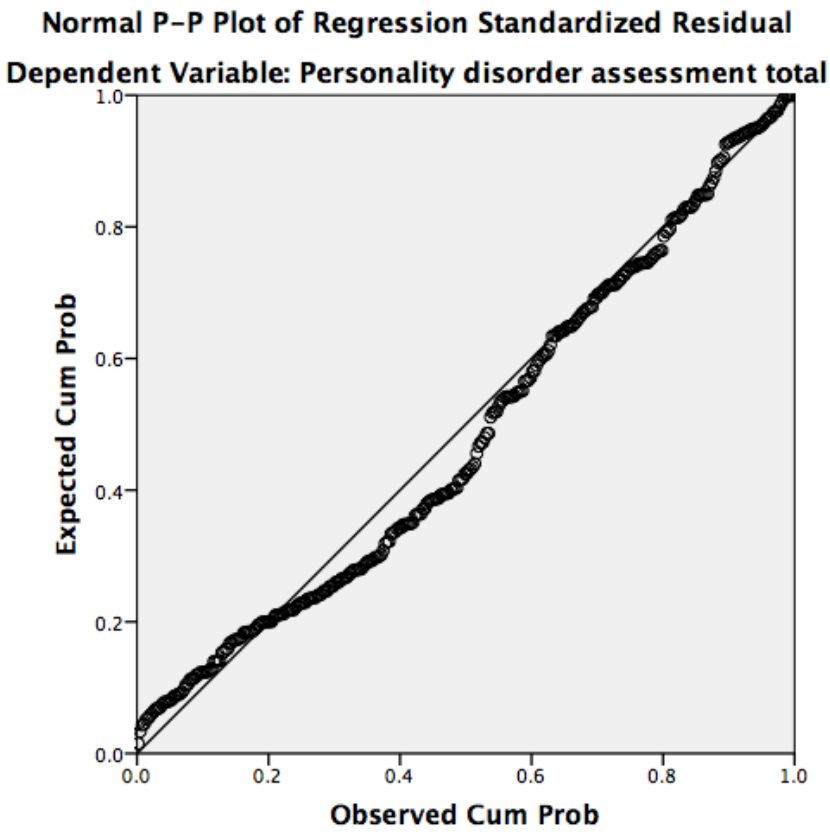
Residuals Statistics[a]

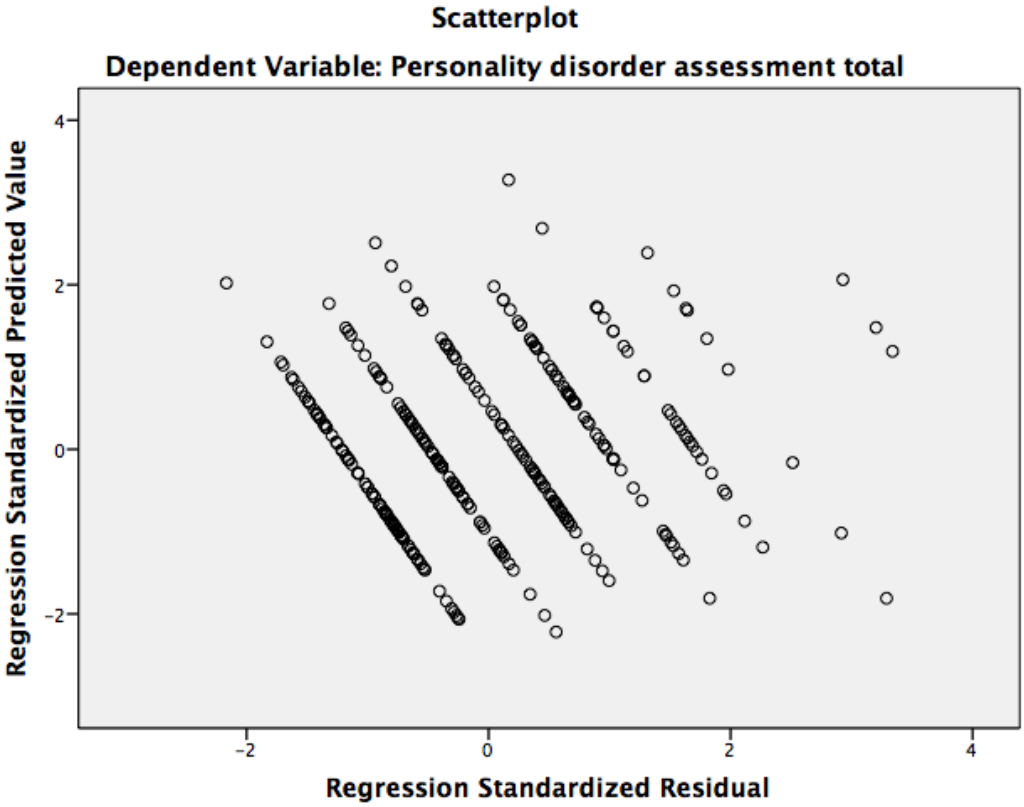
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.24	3.77	1.66	.646	330
Std. Predicted Value	-2.220	3.275	-.001	1.004	330
Standard Error of Predicted Value	.076	.336	.125	.038	330
Adjusted Predicted Value	.22	3.76	1.66	.646	330
Residual	-2.966	4.569	.000	1.352	330
Std. Residual	-2.167	3.338	.000	.988	330
Stud. Residual	-2.184	3.444	.000	.993	330
Deleted Residual	-3.012	4.862	.001	1.367	330
Stud. Deleted Residual	-2.197	3.503	.001	.997	330
Mahal. Distance	.011	18.865	2.011	2.104	330
Cook's Distance	.000	.254	.004	.015	330
Centered Leverage Value	.000	.057	.006	.006	330

a. Dependent Variable: Personality disorder assessment total

Charts


Histogram
Dependent Variable: Personality disorder assessment total
Mean = -3.43E-4
Std. Dev. = 0.988
N = 330
Frequency
50
40
30
20
10
0
-2
0
2
4
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Personality disorder assessment total
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: Personality disorder assessment total
Regression Standardized Predicted Value
Regression Standardized Residual
4
2
0
-2
-2
0
2
4

Appendix 16: Data Output for Mediation Analyses with Resilience Mediating the Relationship Between Model of Other and Personality Disorder

Regression analyses for Mediation Analysis

Regression

Descriptive Statistics

	Mean	Std. Deviation	N
Resilience assessment question total scale	61.28	13.762	343
MO	-.4242	3.78230	330

Correlations

		Resilience assessment question total scale	MO
Pearson Correlation	Resilience assessment question total scale	1.000	.108
	MO	.108	1.000
Sig. (1-tailed)	Resilience assessment question total scale	.	.025
	MO	.025	.
N	Resilience assessment question total scale	343	330
	MO	330	330

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	MO[b]	.	Enter

a. Dependent Variable: Resilience assessment question total scale
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.108[a]	.012	.009	13.702

a. Predictors: (Constant), MO
b. Dependent Variable: Resilience assessment question total scale

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	725.586	1	725.586	3.865	.050[b]
	Residual	61583.058	328	187.753		
	Total	62308.644	329			

a. Dependent Variable: Resilience assessment question total scale
b. Predictors: (Constant), MO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	61.444	.759		80.950	.000		
	MO	.393	.200	.108	1.966	.050	1.000	1.000

a. Dependent Variable: Resilience assessment question total scale

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	MO
1	1	1.112	1.000	.44	.44
	2	.888	1.119	.56	.56

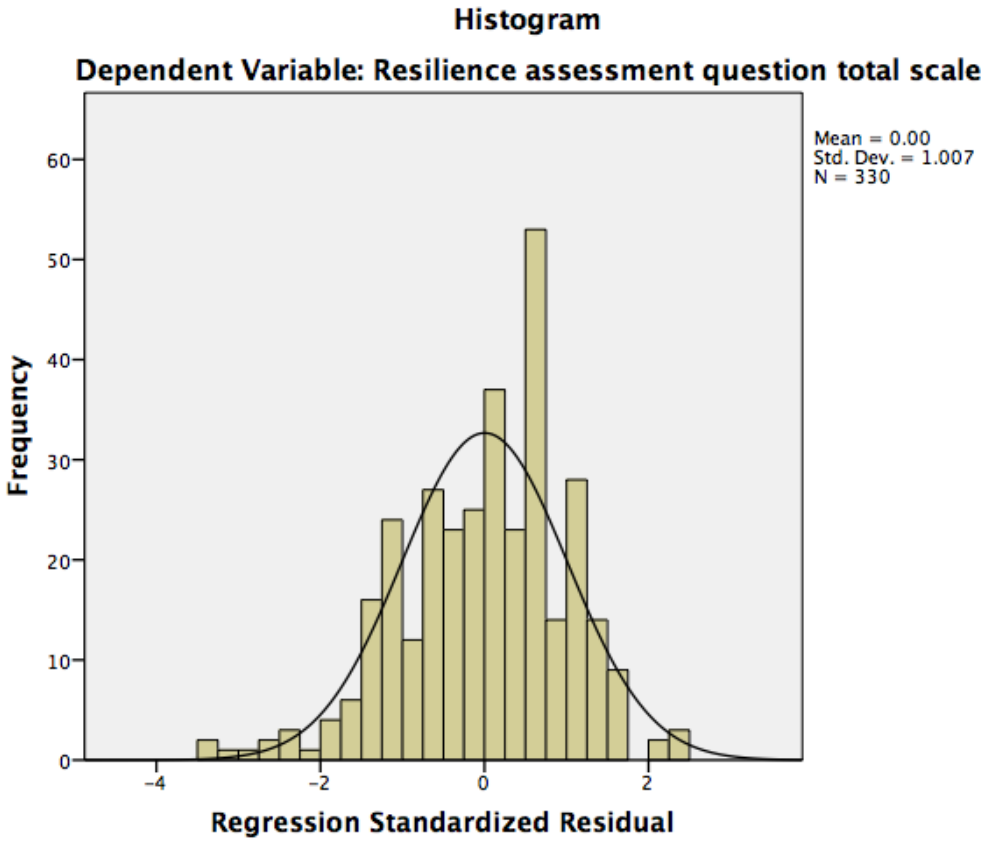
a. Dependent Variable: Resilience assessment question total scale

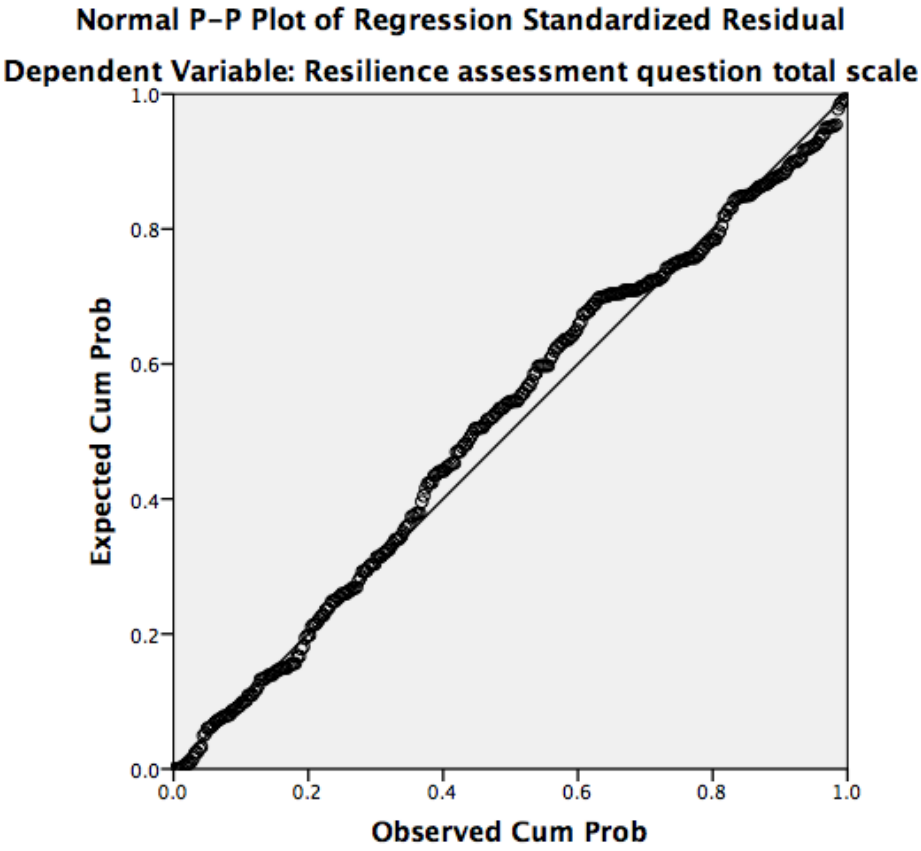
Residuals Statistics[a]

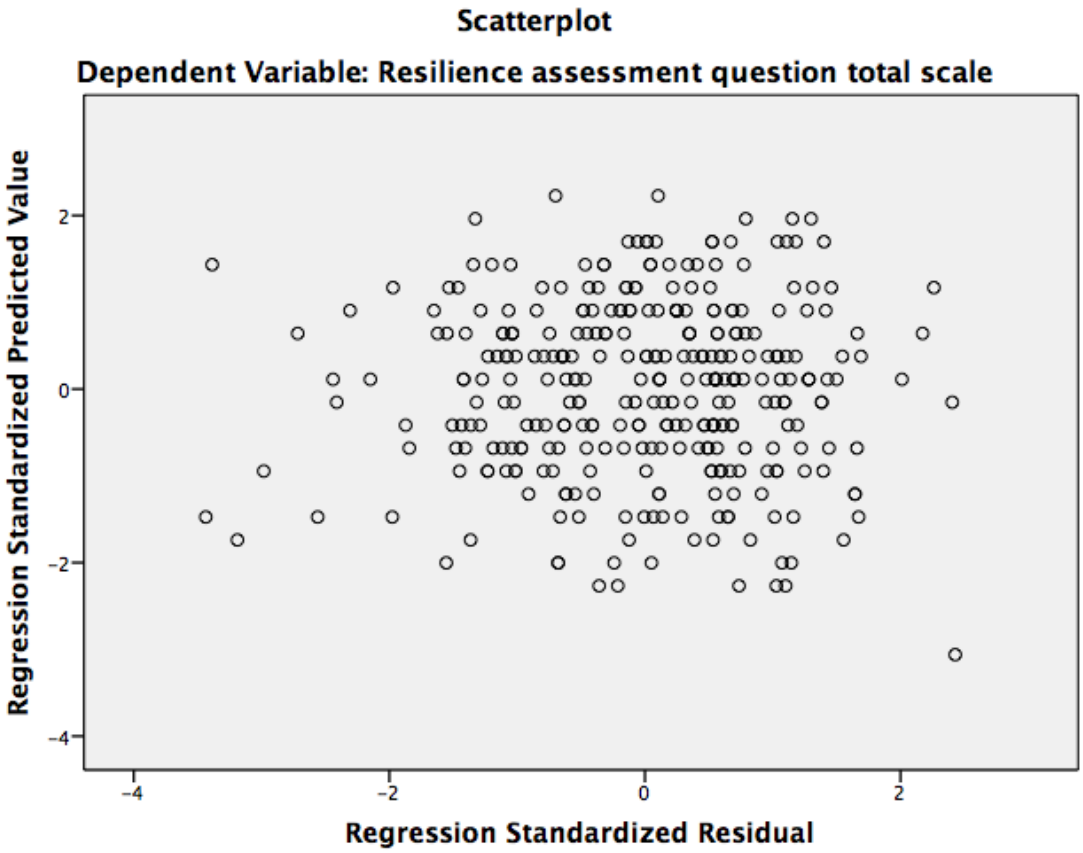
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	56.73	64.58	61.28	1.485	330
Std. Predicted Value	-3.061	2.227	.000	1.000	330
Standard Error of Predicted Value	.759	2.432	1.027	.289	330
Adjusted Predicted Value	55.65	64.76	61.27	1.497	330
Residual	-47.088	33.268	.023	13.800	330
Std. Residual	-3.436	2.428	.002	1.007	330
Stud. Residual	-3.453	2.467	.002	1.011	330
Deleted Residual	-47.546	34.350	.027	13.893	330
Stud. Deleted Residual	-3.512	2.487	.001	1.015	330
Mahal. Distance	.013	9.367	.997	1.258	330
Cook's Distance	.000	.099	.003	.009	330
Centered Leverage Value	.000	.028	.003	.004	330

a. Dependent Variable: Resilience assessment question total scale

Charts


Histogram
Dependent Variable: Resilience assessment question total scale
Mean = 0.00
Std. Dev. = 1.007
N = 330
Frequency
60
50
40
30
20
10
0
-4
-2
0
2
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Resilience assessment question total scale
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0



Regression

Descriptive Statistics

	Mean	Std. Deviation	N
Personality disorder assessment total	1.66	1.509	343
MO	-.4242	3.78230	330
Resilience assessment question total scale	61.28	13.762	343

Correlations

		Personality disorder assessment total	MO	Resilience assessment question total scale
Pearson Correlation	Personality disorder assessment total	1.000	-.162	-.329
	MO	-.162	1.000	.108
	Resilience assessment question total scale	-.329	.108	1.000
Sig. (1-tailed)	Personality disorder assessment total	.	.002	.000
	MO	.002	.	.025
	Resilience assessment question total scale	.000	.025	.
N	Personality disorder assessment total	343	330	343
	MO	330	330	330
	Resilience assessment question total scale	343	330	343

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Resilience assessment question total scale, MO[b]	.	Enter

a. Dependent Variable: Personality disorder assessment total

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.353[a]	.124	.119	1.416

a. Predictors: (Constant), Resilience assessment question total scale, MO

b. Dependent Variable: Personality disorder assessment total

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93.133	2	46.567	23.222	.000[b]
	Residual	655.720	327	2.005		
	Total	748.853	329			

a. Dependent Variable: Personality disorder assessment total

b. Predictors: (Constant), Resilience assessment question total scale, MO

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.758	.359		10.460	.000		
	MO	-.051	.021	-.128	-2.468	.014	.988	1.012
	Resilience assessment question total scale	-.035	.006	-.315	-6.049	.000	.988	1.012

a. Dependent Variable: Personality disorder assessment total

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	MO	Resilience assessment question total scale
1	1	1.995	1.000	.01	.01	.01
	2	.981	1.426	.00	.98	.00
	3	.024	9.141	.99	.01	.99

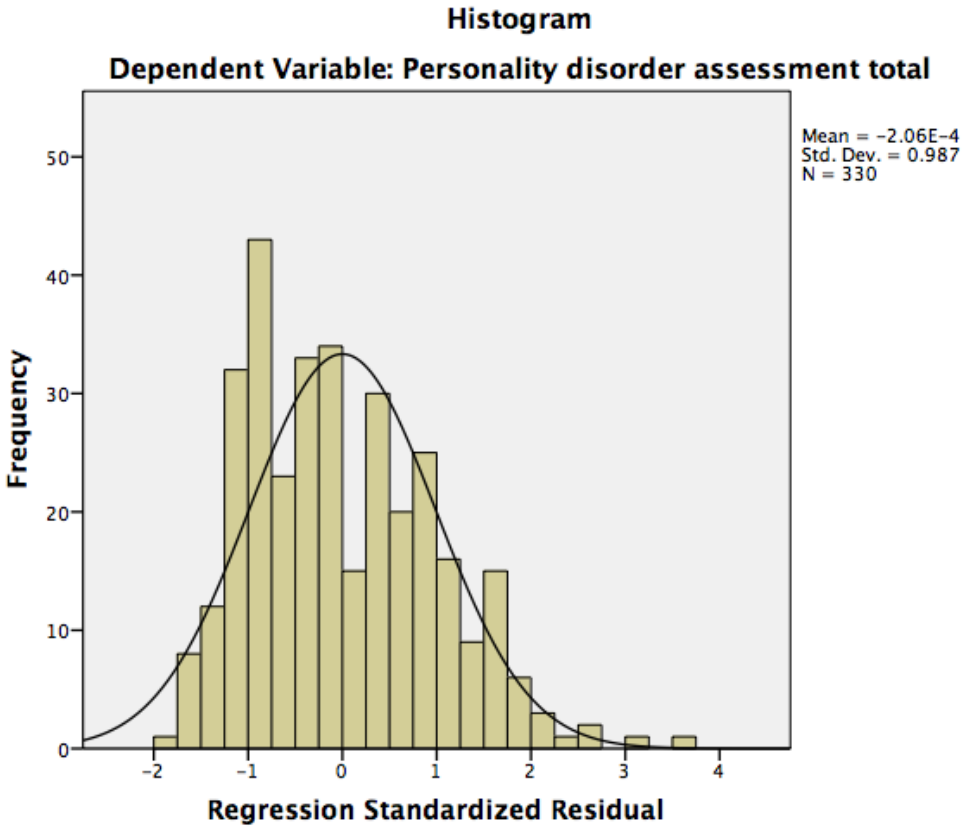
a. Dependent Variable: Personality disorder assessment total

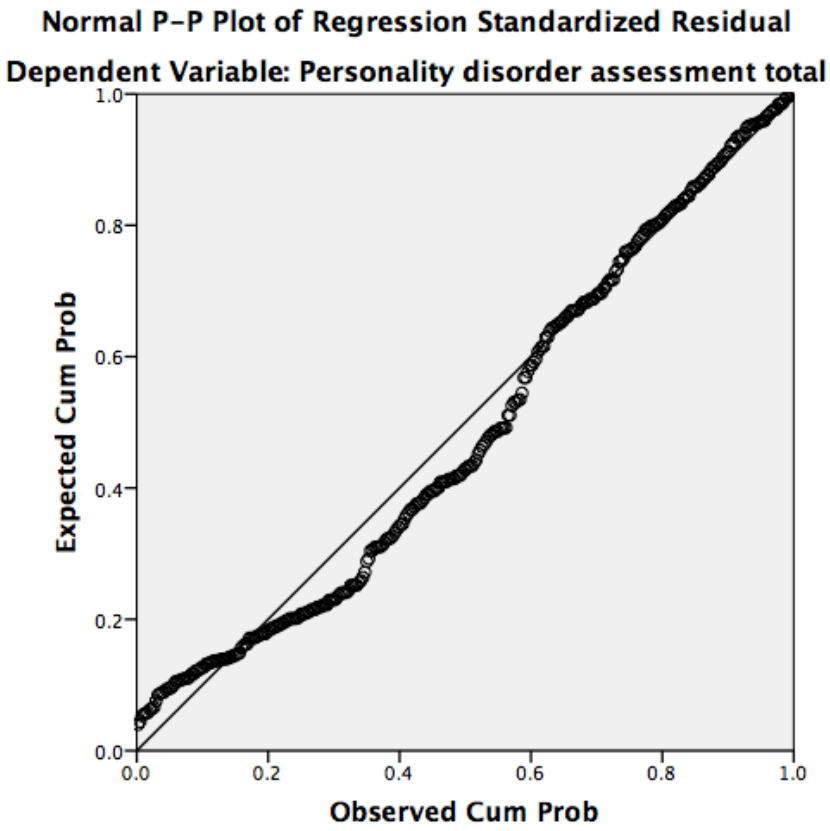
Residuals Statistics[a]

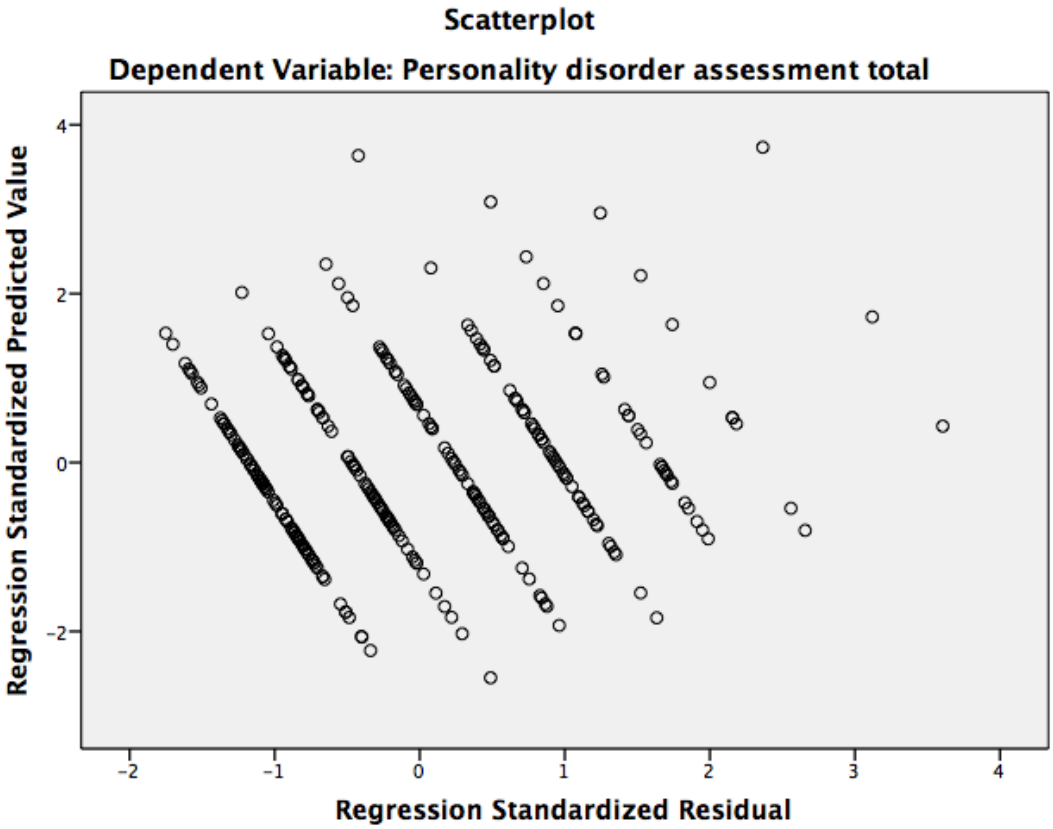
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	.31	3.65	1.66	.536	330
Std. Predicted Value	-2.549	3.734	-.001	1.007	330
Standard Error of Predicted Value	.078	.315	.129	.040	330
Adjusted Predicted Value	.29	3.63	1.66	.535	330
Residual	-2.480	5.106	.000	1.398	330
Std. Residual	-1.751	3.606	.000	.987	330
Stud. Residual	-1.761	3.613	.000	.992	330
Deleted Residual	-2.506	5.126	.001	1.411	330
Stud. Deleted Residual	-1.766	3.682	.001	.995	330
Mahal. Distance	.014	15.279	2.011	2.127	330
Cook's Distance	.000	.093	.003	.007	330
Centered Leverage Value	.000	.046	.006	.006	330

a. Dependent Variable: Personality disorder assessment total

Charts


Histogram
Dependent Variable: Personality disorder assessment total
Mean = -2.06E-4
Std. Dev. = 0.987
N = 330
Frequency
0
10
20
30
40
50
-2
-1
0
1
2
3
4
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Personality disorder assessment total
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0


Scatterplot
Dependent Variable: Personality disorder assessment total
Regression Standardized Predicted Value
Regression Standardized Residual
4
2
0
-2
-2
-1
0
1
2
3
4