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School of Psychology

**Care Leavers: The Role of Attachment and Early Maladaptive Schemas on
Maladaptive Coping Following Childhood Abuse**

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by

Melanie Faye Jarvis

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Abstract

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Melanie Faye Jarvis

Childhood abuse has been shown to have significant negative consequences on psychological wellbeing and functioning, and attachment style has been proposed as a mediator in such relationships. The literature has recognised maladaptive coping as a consequence of both childhood abuse and attachment insecurity. A systematic review of the literature examined the role of attachment and coping in individuals who have experienced childhood abuse. Results indicated significant relationships between childhood abuse and both attachment insecurity and maladaptive coping. Attachment style consistently mediated the relationship between childhood abuse and maladaptive coping. The influence of different categories of abuse and attachment figures was also observed. Methodological issues highlight the need for further research. Clinical implications are also discussed.

Prevalence rates for childhood abuse and attachment insecurity are high in the care leaver population. Although Early Maladaptive Schemas and maladaptive coping are associated with these factors, they have not been examined within this population. The empirical paper used a cross sectional design to examine the role that attachment and Early Maladaptive Schemas play in the relationship between childhood abuse and maladaptive coping. Self-report measures were completed by 53 care leavers, identifying high rates of childhood abuse, attachment insecurity, Early Maladaptive Schemas and maladaptive coping. Maladaptive coping was predicted by childhood abuse, attachment anxiety and Early Maladaptive Schemas, but not attachment avoidance. There were indirect effect of childhood abuse on maladaptive coping through attachment anxiety and the disconnection and rejection schema domain. Further research is needed to replicate and generalise the findings, however results highlight the importance of providing targeted psychological interventions to this population.

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¹ Please note that both the Young Schema Inventory and the Young Compensation Inventory have not been included due to the copyright parameters set by the author.

Research Thesis: Declaration of Authorship

| | |
|-------------|---------------------|
| Print name: | Melanie Faye Jarvis |
|-------------|---------------------|

| | |
|------------------|--|
| Title of thesis: | Care Leavers: The Role of Attachment and Early Maladaptive Schemas on Maladaptive Coping Following Childhood Abuse |
|------------------|--|

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

- 1 This work was done wholly or mainly while in candidature for a research degree at this University;
- 2 Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
- 3 Where I have consulted the published work of others, this is always clearly attributed;
- 4 Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
- 5 I have acknowledged all main sources of help;
- 6 Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
- 7 None of this work has been published before submission:

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Definitions and Abbreviations

| Abbreviation | Explanation |
|---------------------|---|
| DV | Domestic Violence |
| PTSD | Post-Traumatic Stress Disorder |
| IWMs | Internal Working Models |
| EMS | Early Maladaptive Schemas |
| LAC | Looked After Children |
| NEET | Not in Education or Employment |
| YSQ-SF3 | The Young Schema Questionnaire- Short Form 3 |
| ECR-RS | Experience in Close Relationships-Relationship Structures Questionnaire |
| CATS | The Child Abuse and Trauma Scale |
| AAI | The Adult Attachment Interview |

| Term | Definition |
|------------------------|---|
| Childhood Abuse | The experience of neglect, witnessing DV, physical abuse, emotional abuse or sexual abuse in childhood. |
| Care Leavers | Any adult who spent time in care as a child (either foster care, care homes or placements with extended family) |

Chapter 1: Systematic Review

The Relationship between Childhood Abuse, Attachment, and Coping

1.1 Introduction

Childhood abuse has significant long term consequences on psychological wellbeing and functioning (Ball & Links, 2009; Briere, Hodges & Godbout, 2010; Briere & Scott, 2015; Gavin & Levita, 2015; Maniglio, 2009; McFetridge, Milner, Zanarini, 2000). Associations have also been found between childhood abuse and maladaptive coping strategies (Dishoom- Brown et al., 2017; Filipas & Ullman, 2006; Logan, Walker, Jordan & Leukefeld, 2006), and attachment insecurity has been recognised as a factor within this relationship (Kobak & Sceery, 1988; Marganska, Gallagher & Miranda, 2013; Mikulincer, Shaver & Pereg, 2003; Wei, Volge, Ku & Zakalik, 2005). Although relationships between these factors have been demonstrated, there is no clear understanding of the mechanisms underlying them. This review therefore aims to investigate the role of attachment, and coping in individuals who have experienced childhood abuse.

1.1.1 Childhood Abuse

There is some disparity in the way childhood abuse is defined and categorised in the literature (Herrenkohl & Herrenkohl, 2009). The UK Government (UK Government, 2010) includes; physical abuse, emotional abuse, and sexual abuse as recognised categories. However, research has promoted the inclusion of witnessing domestic violence (DV) as a further significant category (Herrenkohl & Herrenkohl, 2007). According to Briere (2002), childhood interpersonal trauma can be divided into two categories: acts of omission and acts of commission². The present study will employ a holistic definition of abuse including neglect, witnessing DV, physical abuse, emotional abuse and sexual abuse.

² Within this definition, acts of omission refer to the inability or refusal of caregivers to give necessary behaviours that are crucial to the development of the child; both psychological and physical neglect are proposed to be included within this definition (Briere, 2002). Acts of commission involve abusive behaviours such as psychological, physical, or sexual abuse directed towards the child (Briere, 2002).

In the last few decades there has been increased awareness surrounding the prevalence and correlating sequelae of childhood abuse. Prevalence data from the NSPCC revealed that one in ten children will experience neglect, one in 20 will experience sexual abuse, and one in 14 will experience physical abuse (NSPCC, 2018). One fifth of all abuse victims are thought to have also suffered emotional abuse (Creighton, 2004). The experience of childhood abuse has been associated with a range of social and interpersonal factors including; family dysfunction (Edwards & Alexander, 1992; Freidrich, Beilke & Urquiza, 1987), poor economic conditions (Berger, 2005; Paxson & Waldfogel, 2002; Stith et al., 2009; Stoltenborgh, van IJzendoorn, Euser & Bakermans-Kranenburg, 2011), and family or child social isolation (Hazler & Denham, 2002).

Much of what is known regarding childhood abuse has arisen from studies which have focussed on specific forms of abuse in isolation. However, emerging evidence suggests that abuse categories are interconnected and individuals who report one form of abuse are more likely to have also suffered another (Arata, Langhinrichsen-Rohling, Bowers & O'Brien, 2007; Finkelhor, Ormrod, Turner & Holt, 2009; Herrenkohl & Herrenkohl, 2009; Higgins & McCabe, 2003). Despite this, the research has focussed more extensively on physical and sexual abuse than emotional abuse and neglect, or multi-form abuse (Higgins & McCabe, 2003), highlighting the need for further research.

1.1.2 Childhood Abuse and its Negative Sequelae

Childhood abuse has been associated with a range of mental health difficulties (Kendall-Tackett, 2002) including; depression and anxiety (Beitchman, Zucker, Hood, DaCosta & Akman, 1992; Putnam, 2003), post-traumatic stress disorder (PTSD; Kendall-Tackett, 2002), and personality disorder (Spataro, Mullen, Burgess, Wells & Moss, 2004). It has been suggested that the psychological effects are cumulative and based on the frequency and intensity of the experience (Anda et al., 2006; Greene, Ford, Wakefield & Barry, 2014). Additionally, Finkelhor et al. (2005) found the number of categories of abuse experienced was a stronger predictor of psychological difficulties than any one type of abuse. Individuals who have experienced childhood abuse are also at a greater risk of experiencing interpersonal abuse (e.g. DV) later in life (Briere & Scott, 2015; Duckworth & Follette, 2012; Messman-Moore, Long & Siegfried, 2000), indicating a lifelong vulnerability for survivors of abuse.

Although relationships between childhood abuse and negative outcomes have been widely identified, the processes involved are less clear (Dugal, Bigras, Godbout & Bélanger, 2016). Such outcomes, which are often considered a direct consequence of childhood abuse, might instead act as contributing mechanisms triggering or exacerbating the onset of a sequence of psychological difficulties in adulthood (Dugal et al., 2016). Indeed, childhood abuse related symptoms (e.g. affect dysregulation and self-destructive behaviour) have been associated with an increased risk of further distress in adulthood (Ehring et al., 2014; Gratz, Paulson, Jakupcak & Tull, 2009). Likewise, drug and alcohol use, which is also associated with childhood abuse, is likely to lead to decreased environmental awareness³, and involvement in risky behaviours, putting one at risk of further distress (Briere, Hodges & Godbout, 2010).

Individuals who have experienced childhood abuse are more likely to have difficulties in adult relationships (Godbout, Lussier & Sabourin, 2006), and attachment insecurity (Frias, Brassard, & Shaver, 2014; Labadie, Godbout, Vaillancourt-Morel & Sabourin, 2018; Mikulincer and Shaver, 2007; Muller, Thornback & Bedi, 2012; Schottenbauer, Arnkoff, Glass & Hafter, 2006). This is thought to be a consequence of maladaptive interpersonal domains, which in turn lead to feelings of insecurity about the trustworthiness of others (Dugal et al., 2016). As such, attachment theory may offer helpful insights into the development and maintenance of negative outcomes for this group.

1.1.3 Attachment Theory

According to Bowlby's attachment theory (Bowlby, 1973; Bowlby, 1984), attachment behaviour is regulated by an innate motivational system, designed by natural selection to promote the safety and survival of infants. As such, children are suggested to hold an innate drive to seek proximity to an attachment figure when they are faced with a threat. When a child has their attachment needs satisfied, they are thought to be able to safely focus on activities outside of the attachment relationship in the knowledge that their attachment figure will be available in times of need (Mikulincer & Shaver, 2007). On the other hand, the experience of an abusive or neglectful attachment figure is suggested to undermine the child's confidence in the relationship (Mikulincer & Shaver, 2007).

³ Environmental awareness refers to one's ability to risk assess and manage their external stimuli in their surroundings

Within early attachment relationships, children are proposed to develop templates of Internal Working Models (IWMs) based on their experience of care (Bowlby, 1973). Internal Working Models are defined as a set of expectations and beliefs about the self (e.g. whether I am worthy or loveable), others (e.g. whether others are good or safe) and the relationship between the self and others (e.g. whether others are available or supportive). One's IWMs are suggested to affect the development of personality, affect-regulation strategies and attachment style (Bowlby, 1973; Mikulincer & Shaver, 2003). Children that experience loving, nurturing, warm and consistent care from an attachment figure are said to develop a sense of self-worth and trust, which leads to positive IWMs of the self and others, and a secure attachment style (Mikulincer & Shaver, 2007). Children who are exposed to abusive parenting, in turn, are proposed to develop IWMs that prevent the growth of security in the self and in relationships (Mikulincer, Shaver & Solomon, 2015).

Ainsworth et al. (1978) devised an assessment technique called the Strange Situation Classification to investigate how attachments styles vary between children. Through observation of mother-child interactions they categorised three core attachment styles; secure, insecure-avoidant, and insecure-resistant/ambivalent. A disorganised/disoriented attachment subtype was later recognised in children whose behaviour did not fall within the groups of well-defined behaviour (Main & Solomon, 1990). Table 1 offers illustrative examples of the four categorised attachment styles.

Table 1

Child Attachment Categories based on Ainsworth et al. (1978) and Main & Solomon (1990)

| Attachment Category | Parenting Style | Child's Belief | Child's Behaviour |
|----------------------------|---|---|---|
| Secure | Available, consistent, warm | Knows that their need for love, nurturance and safety will be met by their caregiver. | Upset on separation to caregiver but easily soothed on their return |
| Insecure-Ambivalent | Inconsistent: A mix of warmth and nurturance with rejection | Lack certainty about the availability of mother | Highly anxious; a mixture of clingy and rejecting behaviours towards caregiver. Distressed on separation from caregiver and not easily soothed on her return |
| Insecure-Avoidant | Lack of warmth and nurturance. Rejecting of the child's needs | Expects needs not to be met and fears rejection | Do not orientate themselves to their caregiver. Do not show visual signs of upset when separated. |
| Disorganised | Abusive or frightening care giving | The care giver is simultaneously the source of alarm and the only solution | Contradictory behaviours; e.g. Freezing, and abnormal movements. |

1.1.3.1 Attachment in Adulthood

Internalised emotional and behavioural regulatory patterns developed within the parent–child attachment relationship are thought to inform how children interpret and express future behaviours and emotions (Groh, Roisman, van IJzendoorn, Bakermans-Kranenburg & Fearon, 2012). It is suggested that adults tend to selectively filter social perceptions in ways that confirm their IWMs working models of self and others, while rejecting disconfirming information (Bowlby, 1988). In relationships, anxiously attached adults desire closeness and to be sensitive to threats of rejection (Griffin & Bartholomew, 1994). Avoidantly attached adults have learnt that communicating their needs does not lead to support, and so they deactivate the attachment system, reduce emotional expression, and avoid closeness with others (Mikulincer et al., 2003). Adults with fearful avoidant attachment styles are similarly fearful of rejection but at the same time dependent on others for their sense of self-worth (Bartholomew & Horowitz, 1991), leading to conflict and anxiety.

The basic principle of attachment theory is that early attachment relations form the prototype for future relationships via the development of IWMs (Fraley, 2002). However, there is some debate about the stability of attachment style over the lifespan. A meta-analysis conducted by Fraley (2002) looked at 27 effect sizes across 23 studies, finding moderate overall stability across the first 19 years of life. Building on this study, Pinquart et al. (2013) conducted a further meta-analysis on 127 papers examining 225 time intervals. Similar to the previous findings, they found moderate overall attachment stability; however these patterns were inconsistent across longer time intervals. Furthermore, no significant stability was found in intervals larger than 15 years and coefficients were higher for time intervals of less than two years compared to time intervals of more than five years. In addition to this, there is emerging evidence that secure attachments can develop over time (Mikulincer & Shaver, 2007), although research in this area is limited (Saunders, 2011).

1.1.3.2 Assessment of Attachment in Adulthood

The assessment of adult attachment has largely relied on participant interview or self-report questionnaires. The former began with the development of the Adult Attachment Interview (AAI: Main, Kaplan & Cassidy, 1985). In the AAI⁴, coding schemes are applied to assess participants' narrative about their experience of childhood. A longitudinal study by Waters and Cummings (2000) assessed participants at one (using the Strange Situation; Ainsworth et al., 1978), and at 21 years of age, demonstrating a strong correlation between the two assessments.

In contrast to the AAI, self-report measures of attachment tend to examine attachment related thoughts and feelings based on adult relationships (Hazan & Shaver, 1987), focusing overtly on the adults' appraisals of their close relationships. They therefore rely on conscious awareness of attachment experiences, a limitation which is recognised within the literature (Roisman, 2009). Many of the available self-report measures have been shown to poorly correlate to the AAI (Waters & Cummings, 2000). On the other hand, significant correlations have been demonstrated between self-report measures across domains of attachment security, anxiety, and avoidance (Waters, Crowell, Elliot, Corcoran & Treboux, 2002). As such, the AAI and self-report measures are thought to measure different domains of attachment (Waters et al., 2002), at different levels (Roisman, 2009).

⁴ The AAI categorises attachment style into four groups similar to infant attachment categories; secure, avoidant, ambivalent, and disorganised. Within the AAI, adults are labelled as having autonomous, dismissing, preoccupied and unresolved attachments, respectively (Main et al., 1985)

The Attachment Self Report was the first self-report measure to be developed (Hazan & Shaver, 1987), and was designed to classify adults into secure, ambivalent and avoidant attachment styles⁵. The Relationship Questionnaire (Bartholomew & Horowitz, 1991) and Relationship Scales Questionnaire (Griffin & Bartholomew, 1994) were later designed based on a two dimensional concept of attachment (avoidance and anxiety), thought to relate to categories of IWM of self and other (Bartholomew & Horowitz, 1991). However, In light of these developments, questions were raised about the appropriateness of using discrete categories when measuring attachment. It was suggested that these had limited empirical support, and failed to encapsulate individual differences (Fraley & Waller, 1998). Dimensional measures, that do not designate respondents to one attachment style, are now widely favoured in attachment research, as they are proposed to account for significant individual differences, both in global and relationship specific attachment representations (Fraley & Waller, 1998). An example of this type of measure is the Experiences in Close Relationships Questionnaire (Fraley, Waller & Brennan, 2000) which offers a two dimensional measure⁶ for adult relationships, and has been widely accepted in the literature (Mikulincer & Shaver, 2007).

1.1.3.3 The Relationship between Childhood Abuse, Adult Attachment and Negative Sequelae

The experience of abuse can lead to the development of negative IWMs. One may internalise negative beliefs about themselves (e.g. that they are un-loveable or helpless), and others (e.g. others are dangerous or rejecting; Godbout, Briere, Lussier & Sabourin, 2014). Survivors of abuse are also likely to blame themselves for the experience, feel guilty, and have difficulties trusting and becoming intimate with others (Murthi, Servaty-Seib & Elliot, 2006). All of which in turn can form the development of insecure attachment patterns.

The IWMs associated with attachment insecurity are thought to lead to the development of maladaptive emotion regulation strategies which can act as a risk factor for later psychopathology (Carlson, 1998). Shaver and Mikulincer (2002) highlight that, at times of attachment stress, distinct emotional regulation patterns are triggered for anxious and avoidant attachment styles. In response to threat, attachment anxiety is thought to trigger hyper-activating strategies and hypervigilance to threat and attachment related cues. According to Shaver and Mikulincer (2002), these strategies lead to the over-detection of threat and intensity negative emotion and rumination, leading to a self-amplifying cycle of distress. On the other hand,

⁵ based on the infant categories found within the Strange Situation observations (Ainsworth et al., 1978).

⁶ i.e. participants get a score for both attachment anxiety and avoidance.

attachment avoidance is thought to trigger deactivating strategies the distancing of threat and attachment related cues. According to Shaver and Mikulincer (2002), these strategies are associated with low levels of intimacy, denial and suppression of painful thoughts, feelings and memories which have negative consequences for cognitive and emotional openness.

Coping processes have also been proposed to explain the relationship between childhood abuse, attachment and psychological difficulties. Abuse experiences are thought to lead to underdeveloped or ineffective coping⁷ at times of attachment activation (Mikulincer & Shaver, 2007). Indeed, attachment insecurity has been associated with avoidant coping in adults who have experienced abuse (Shapiro & Levendosky, 1999), and the use of avoidant, and emotion focussed⁸ coping strategies have been associated with relationship difficulties, anxiety and depression (Bayley, Slade & Lashen, 2009; Mikulincer, et al., 1993).

1.1.4 Coping as a Construct

One of the most widely mentioned definitions of coping comes from Lazarus and Folkman, who proposed “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”(Lazarus & Folkman, 1984; p89). They proposed specific features of coping including the role of both cognitive and behavioural processes, and suggested that coping is not merely a response to a threat, but a dynamic process where one’s appraisal of an event influences their emotional arousal and behavioural response (Lazarus & Folkman, 1984). Coping is considered an adaptive response to threat, and methods of coping may also be dependent upon the circumstances surrounding the stressor and the time they are employed (Coyne & Racioppo, 2000). As such, the way one copes should be considered within the context of their experience and environment. However, there has been some disagreement about the underlying processes of coping and how these are best measured (Compas et al., 2014).

1.1.4.1 Assessment of Coping

The literature has employed various methods of clustering coping processes using theory based categories (Folkman & Moskowitz, 2004). As a result coping measures tend to categorise

⁷ Underdeveloped coping refers to a lack of appropriate adaptive coping resources (e.g. problem solving, support seeking).

⁸ Avoidant coping refers to “Coping that is aimed at managing or altering the problem causing the distress” vs emotion focussed coping which refers to. “coping that is directed at regulating emotional responses to the problem” (Lazarus & Folkman, 1984, p. 150).

dimensions of coping strategies into distinct theory driven domains (Skinner, Edge, Altman & Sherwood, 2003). A common categorisation used across measures is approach versus avoidant coping⁹ (Roth & Cohen, 1986). An example is the Miller Behavioural Style Scale (Miller, 1987) which discriminates between individuals who are vigilant to stressors, and individuals who distract themselves from stressors. Others have distinguished between problem-focused coping and emotion-focussed coping¹⁰ (Folkman & Lazarus, 1988). An example of this is the Ways of Coping Questionnaire (Folkman & Lazarus, 1988). Despite the existence of such coping dimensions within the literature, it has been argued that single function categories (e.g. problem vs emotion focussed) fail to encapsulate the range of functions that coping likely serves, and that topological distinctions (e.g. approach vs avoidance) do not encapsulate the multidimensional ways in which individuals cope (Skinner & Zimmer-Gembeck, 2007).

In response to these criticisms, Skinner et al. (2003) suggested that specific 'ways of coping' may have more relevance than broader categories. In a review of 44 studies, they also noted discrepancies in coping responses across developmental stages, and a number of important sub groups of coping¹¹ that do not exist in many of the categorical measures were also identified. To this end, coping was conceptualised as a dynamic interplay of personal, environmental and developmental factors, meaning that one individual may respond to the same stressor differently to another, and an individual may respond differently from one situation to another (Skinner et al., 2003). An example of a measure that employs a multi-dimensional definition of coping is the COPE (Carver et al., 1989), which includes a diverse range of coping styles, encompassing a breadth of strategies that have received empirical support in the coping literature. Examples of subcategories include; active coping, planning, denial, mental disengagement, and alcohol and drug use.

Understanding the way people cope with stress is essential when observing populations who have faced significant adversity. To ensure an in depth examination of coping is considered within this review, a broad definition of coping will be employed. Studies that include a coping measure of any kind will be included within the review. Moreover, studies that measure domains of coping which have been empirically tested, for example alcohol and drug use (Carver et al., 1989), will be included.

⁹ Approach versus avoidant coping is defined as "cognitive and emotional activity that is oriented either toward or away from threat" (Roth & Cohen, 1986, p. 813).

¹⁰ Problem focussed coping includes strategies targeted to reduce the negative emotions connected to the problem. Emotion focussed coping includes strategies employed to alter the circumstances of the stressor for a desired outcome (Folkman & Lazarus, 1988).

¹¹ These included; support-seeking, escape, distraction, problem solving, denial, self-reliance, aggression, social isolation and helplessness (Skinner et al., 2003).

1.1.4.2 The Relationship between Childhood Abuse and Coping

The coping strategies employed by individuals who have experienced abuse are likely to represent another factor in the variation of outcomes observed. Individuals who have developed adaptive ways of managing¹² abuse related memories and emotions are thought to fare better with regards to psychological outcomes, than those who do not (Walsh et al., 2010). However, individuals who have experienced childhood abuse have been found to use more avoidant coping (Walsh, Fortier & DiLillo, 2010), disengagement (Dishoom-Brown et al., 2017; Leitenberg, Gibson & Novy, 2004), denial and self-blame (Dishoom et al., 2017) and substance use (Dishoom- Brown et al., 2017; Filipas & Ullman, 2006; Logan et al., 2006), which is likely to have negative consequences for these individuals. Indeed, avoidant coping and disengagement have been shown to significantly correlate to depressive symptoms (Wright, Crawford & Sebastian., 2007), psychological distress (Johnson & Kenkel, 1991; Leitenberg, Greenwald & Cado, 1992), and trauma symptomology (Fortier et al., 2009) in victims of childhood abuse. However, the causal nature of this relationship remains unclear.

On the other hand, it has been highlighted that the way individual's cope with abuse related experience can change and evolve over time (Burgess & Holstrom, 1976; Horowitz, 1986). Oaksford and Frude (2003) found higher use of avoidant coping immediately following abuse experiences, and more use of cognitive coping¹³ later in life. Indeed, avoidant strategies may be adaptive and necessary for children who have experienced abuse and in the short term as they allow distance from the trauma and reducing distress (Roth & Cohen, 1986).

1.1.5 Summary

Childhood abuse has been shown to have significant consequences on psychological wellbeing and functioning (Kendall-Tackett, 2002). Attachment insecurity (Fearon et al., 2010; Groh et al., 2012; Mikulincer & Shaver, 2007) and coping (Mikulincer & Shaver, 2007) have been identified as mediating variables in the relationship between these factors.

1.1.6 Purpose of Review

¹² Adaptive coping refers to coping which effectively alleviates distress (e.g. positive reinterpretation and growth, emotional support seeking or acceptance).

¹³ e.g. normalising the abuse, and acquiring a sense of psychological control.

Although the relationship between childhood abuse and both attachment and coping have been acknowledged in the literature, no systematic review of all of these variables has been conducted within this population. Such a review is important to improve understanding of the impact of attachment style and coping for individuals who have experienced childhood abuse. It may also offer possibilities for psychological interventions including those that target attachment and coping processes.

Therefore, the current systematic review aims to identify, appraise and synthesise current literature investigating the relationship between childhood abuse, attachment and coping. The review also aims to identify gaps in the literature and areas for future research.

1.2 Methods

The Cochrane protocol offers a protocol for the stages of a systematic review (Higgins & Green, 2011). In order to minimise potential bias within the review, the stages outlined in this protocol were followed, as detailed in the following sections.

1.2.1 Search Strategy

Scoping searches were initially conducted using Google Scholar and DelphiS to identify relevant reviews and empirical studies. The searches yielded several review papers on childhood abuse and coping (Compas et al., 2001; Domhardt, Munzer, Ferget & Goldbeck, 2015; Spaccarelli, 1994), and childhood abuse and attachment (Lionetti, Pastore & Barone, 2015; Lo, Chan & Ip, 2017). A number of empirical papers were identified that examined coping and attachment, either as dependent variables or mediating variables, in victims of childhood abuse. To allow for inclusion of such studies, the following review question was developed:

- What is the relationship between attachment and coping for individuals who have experienced childhood abuse?

A systematic search was then conducted in November 2018, which aimed to search for empirical papers related to the research question. The following electronic databases were searched to obtain published literature: PsycInfo, PsycArticles, Web of Science, Scopus, Ovid, Medline, EMBASE, and The Cochrane Library, using the terms: ('Child*¹⁴ abuse' OR 'Child* trauma' OR 'Child* maltreatment' OR 'complex trauma' OR 'neglect' OR 'sexual abuse' OR 'physical abuse' OR 'emotional abuse') AND ('attachment' OR 'attachment behavior#'¹⁵ OR 'attachment style' OR 'insecure attachment' OR 'avoidant attachment' OR 'ambivalent attachment' OR 'disorganised'¹⁶ attachment' OR 'anxious attachment') AND ('cope' OR 'coping' OR 'coping style' OR coping behavior*' OR 'coping strategy*'). Search terms were developed in collaboration with a specialist librarian to ensure efficacy. Experts in the field were also contacted to verify the novelty of this review topic and to inquire about studies and reviews pending publication. The search strategy was repeated across databases until it was felt that all relevant published literature had been obtained. Further to this, a snowball technique was applied whereby the reference lists of all relevant studies

¹⁴ '*' is used to denote all words starting with the prefix (e.g., child* includes child, children, and childhood)

¹⁵ '#' is used to denote different spelling where extra character may be present (e.g. behavior#r includes behaviour and behaviour)

¹⁶ '?' is used to denote different spellings where one character may be different (e.g. disorganised?ed includes disorganized, and disorganised)

and reviews were scrutinised in order to identify further studies. The results were then narrowed by language (English) and publication type (peer reviewed published journals only) but were not limited by date as it was predicted (based on the scoping searches) that there would be limited amount of literature on this topic.

1.2.1.1 Eligibility Criteria

Given that the scoping searches revealed a limited number of empirical studies on the topic, the inclusion criteria for the review was wide-ranging. To meet the inclusion criteria, articles had to conform to the following criteria; (a) the article was published in English, (b) the article was published in a peer reviewed journal, (c) the sample consisted of individuals who had reported experience of child abuse¹⁷, (d) a measure of attachment (interview or self-report) was used, (e) a measure of coping symptoms. The review included studies that used either specific coping questionnaires or coping related outcomes that measured coping responses previously identified in the Skinner et al. (2003) review (e.g. drug and alcohol use) . All papers that met the inclusion criteria were considered, regardless of the aims or hypotheses tested.

Articles were excluded if the sample population was forensic (e.g. sex offenders) or if the topic related to intergenerational transmissions of abuse, as these were not deemed to address the issues pertinent to this particular review. Case studies, reviews and PhD dissertations were also excluded.

1.2.1.2 Screening and Selection

The PRISMA tool (Mohar, Liberati, Tetzlaff & Altman, 2009) was used to aid reporting the screening process, as presented in Figure 1.

Database searches yielded 535 citations. Once duplicates were removed 206 unique citations remained and were screened for inclusion. Titles and abstracts were then screened using the inclusion and exclusion criteria, resulting in 52 remaining citations for full text screening. Here, 30 articles were excluded for not meeting the eligibility criteria for the following reasons; five were not available in English, five were from the sex offender population and the remaining did not have a measure for attachment, coping or childhood abuse. Two further citations were found during reference list searching from the included citations. In addition to this, experts in the field were

¹⁷ Either sexual abuse, physical abuse, emotional abuse, neglect or witnessing domestic violence.

contacted which yielded no further results. The total number of papers included within the review was 20.

The screening and selection of full texts was completed by the researcher; and a randomly selected sample was cross checked by a second researcher to ensure consistency and reduce potential bias. Disagreements were managed through discussion around the scope of the inclusion and exclusion criteria.

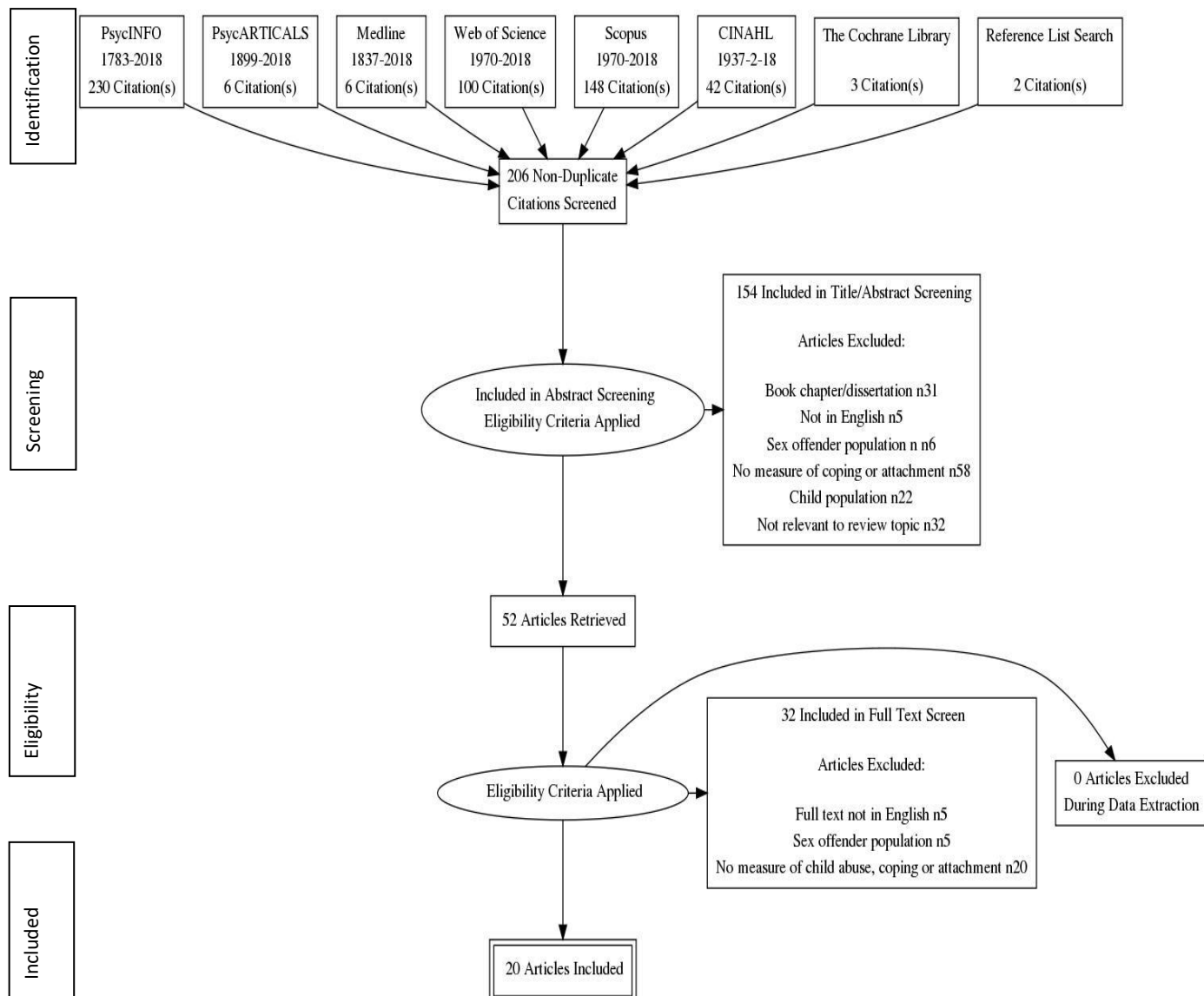


Figure 1: Study Selection Flow Diagram (based on the Prisma Tool; Mohar et al., 2009)

1.2.2 Characteristics of Identified Studies

Of the 20 studies reviewed in this paper, 17 used a cross sectional design, administering measures at a single time point with self-report techniques¹⁸. Two studies employed a quasi-experimental, non-randomised design¹⁹, one with a control group (Elkit, 2009) and one without (Elkit, 2015). Finally one study used a longitudinal design where cross-sections were measured at intervals from a cohort over childhood and adolescence (n=1; Lynksey & Fergusson, 1997).

The studies were conducted in a variety of geographical locations including Canada (Hébert, Daspe & Cyr, 2018), Denmark (Elkit, 2009; Elkit, 2015; Hyland et al., 2018), Hong Kong (Ma & Li, 2014), New Zealand (Lynksey & Fergusson, 1997) and Australia (Irwin, 1999). The remaining studies were conducted in the USA (n=14). Sample size varied greatly across studies, ranging from 80 (Shapiro & Levendosky, 1999) to 1,025 (Lynksey & Fergusson, 1997).

The review included three studies with child or adolescent samples. In these studies the mean age of participants was 14.96 years (ranging from 14 years-16 years; Shapiro & Levendosky, 1999), 8.98 years (ranging from 6 to 13 years; Herbert, Daspe & Cyr, 2018) and 12 years (ranging from 9- 13 years; Ma & Li, 2014). The remaining 17 studies used adult samples, with the mean age ranging from 18.20 years, (Banyard & Canter, 2004) to 45.9 years (Davis, Usher, Dearing, Barkai & Crowell-Doom, 2014).

The studies measured participants from a range of settings. Six measured undergraduate students (Backer- Fulghum, Patock-Peckham, King, Roufa & Hagen, 2012; Banyard & Canter, 2004; Limke, Showers & Zeigler, 2010; Patock-Peckham & Morgan Lopez, 2010; Perlman, Dawson, Dardis, Egan & Anderson, 2016). Five used opportunity sampling recruiting from the local community (Banyard, Hamby & Grych, 2017; Ben-Ami & Baker, 2012; Davis et al., 2003; Irwin, 1999; Lynksey & Fergusson, 1997). Two recruited from parole and probation lists (Dishon-Brown et al., 2017; Winham et al, 2015), and the final seven recruited through treatment settings (e.g. childhood sexual abuse treatment service).

The majority of the studies (n=13) measured a range of categories of childhood abuse. One study split groups of participants into emotional maltreatment and sexual maltreatment (Limke et al., 2010) and one examined groups who had experienced physical versus emotional abuse (Perlman et al., 2016). Of the remaining studies, two studies examined parental neglect specifically

¹⁸ Either questionnaires or interview.

¹⁹ Participants were measured both before and after receiving therapeutic treatment.

(Backer- Fulghum, et al., 2012; Patock-Peckham, 2005), two examined childhood sexual abuse (Elkit, 2009; Elkit, 2015; Herbert et al., 2018), one study looked at parental alienation (Ben-Ami & Baker, 2012) and one looked at a sample of individuals who had witnessed DV in childhood (Karakurt et al., 2013).

A broad range of questionnaires measuring childhood abuse, attachment and coping were employed across the studies. As detailed in Appendix A, the majority of the included studies used standardised assessment tools for measuring childhood abuse (n=12). The remaining eight studies established childhood abuse experiences through participant self-report at interview (n=5) or from the demographics form. As detailed in Appendix B, ten different standardised measures of attachment were used across the studies. With the exception of Davis et al. (2004) who used a structured interview (the Adult Attachment Interview; Main & Cassidy, 1988), all of the studies used self-report attachment assessment tools. As detailed in Appendix C, a range of coping measures were also employed across the studies, with the majority using at least one standardised self-report coping questionnaire (n=13). Of the remaining studies, two studies used questionnaires that included coping subscales, and two studies measured other behaviours defined as coping (i.e. substance misuse or alcohol misuse). Five studies utilised a measure of substance/alcohol abuse in addition to a general coping measure.

As detailed in Table 2, the research aims of most of the studies were not limited to the role of attachment on coping following childhood abuse. To ensure a focussed approach to answering the review question, only data relating to attachment and coping following childhood abuse will be reported and discussed in the following sections.

Table 2
Summary Table of Identified Articles

| Author & setting | Research aims | Study design | Population, demographics, Number of participants | Measures ¹ | Results ²⁰ |
|---|---|------------------------|---|--|--|
| 1. Backer-Fulghum, et al. (2012) USA | Examined the role of perceived parental neglect on adult outcomes. Also investigated stress as a mediator of relationship between perceived parental neglect and pathological reasons for drinking. | Cross-sectional-Survey | Participants were 405 undergraduate students. 30 male and 21 female. The mean age was 19.96 (SD=2.66). 86% Caucasian, 6% African American, 2.5% Hispanic, 2.5% Asian, and 3% other. | Childhood abuse: The Perceived Parental Neglectfulness Scale adapted (Patock- Peckham & Morgan-Lopez's, 2010). Attachment: The Parental Bonding Instrument (Parker et al., 1979). Coping: Reasons for Drinking Alcohol Questionnaire (Johnson et al., 1985) | There was a correlation between attachment, perceived parental neglect, self-esteem, stress and alcohol-related problems χ^2 (26 df) = 24.880, p = .5258, NS; CFI = 1.000; RMSEA=0.000, 95% CI [0.000, 0.037]. Higher levels of perceived mother (mediated effect = .00760, 95% CI = [.00285, .01337]) and father (mediated effect = .00418, 95% CI = [.00043, .00857]). Neglect was indirectly linked to more pathological reasons for drinking through increased feelings of stress. Higher levels of father rejection were indirectly linked to more pathological reasons for drinking through lower self-esteem and more feelings of stress (mediated effect=.04903, 95% CI [.02062, .08537]). Higher levels of mother care were indirectly linked to less pathological reasons for drinking through higher self-esteem and fewer feelings of stress (mediated effect= -.02717, 95% CI [-.05894, -.00106]). Quality assessment Strengths: Clear and appropriate design, method and analyses of results. Weaknesses: Undergraduate population; non- standardised questionnaires used; self-selection and non-response bias |
| 2. Banyard & Canter (2004) USA | An exploratory study of resilience and adjustment to college in childhood abuse victims: Investigated the role of intra- and interpersonal | Cross sectional-Survey | First semester college students: 367 screened for trauma; allocated to 53% trauma group, 47% non-trauma group: Trauma group: 80.4% female, mean age, 18.20, (SD= .65); Non-trauma group 79.5% | Childhood abuse: Stressful Life Events Screening Questionnaire (Goodman et al., 1998). Attachment: Inventory of Parent and Peer Attachment (Armsden & Greenberg, | Between groups: There was no significant difference between the trauma and no trauma groups college adjustment scores; $F(4, 324) = .92$. Females scored significantly higher than males on academic adjustment, $F(1, 327) = 11.19$, $p < .001$; and institutional attachment, $F(1, 327) = 4.66$, $p < .05$. Overall greater trauma exposure significantly positively correlated to more negative academic and personal-emotional adjustment |

²⁰ Only results related to the systematic review question are recorded within this table.

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| | variables in adjustment | | female, mean age = 18.33 (SD= .80). 94% white. | 1987). Coping measures: Ways of Coping Questionnaire (Folkman & Lazarus, 1988), Student Adaptation to College Questionnaire (Baker & Siryk, 1989) | <p>($r = -.17, p = .002$). Within groups: physical abuse was significantly negatively correlated with resilience. Female trauma survivors had significantly higher peer attachment, posttraumatic meaning making, and satisfaction with social support than male trauma survivors. Males had higher scores for paternal attachment than females ($F(6, 155) = 4.29, p < .001$).</p> <p>Quality assessment Strengths: Appropriate sample population; Clear and appropriate design, method and analyses of results; validated measures used. Weaknesses: self-selection and non-response bias; results not internally consistent.</p> |
| 3. Banyard et al. (2017) | Examined protective factors associated with physical health in a sample of adolescents and adults exposed to high levels of adversity including childhood abuse. | Cross sectional-Survey | 2565 participants were recruited from a rural community. 63.9% female. Mean age was 30 years (SD 13.2) 75.6% White/European-American (non-Latino), 12% Black/African-American, 6.4% Latino, 1.2% American Indian/Alaska Native, 0.6% Asian, 0.3% Pacific Islander, and 3.9% multiracial. | <p>Childhood abuse: The Juvenile Victimization Questionnaire (Adapted and piloted for the study) from NatSCEV (Turner et al., 2003). Attachment: Maternal -adapted from the Attachment Behaviours Scale (Furman & Buhrmester, 2009). Paternal-adapted from the partner-specific Experiences in Close Relationships Questionnaire (Fraley et al., 2000). Coping: The Coping Scale (Hamby, Banyard et al., 2013) (partially adapted from Holahan & Moos, 1987).</p> | <p>Both maternal attachment ($r = 0.29, p < 0.01$) and paternal attachment ($0.26, p < 0.01$) significantly positively correlated with coping, , meaning making (whether via following traditions and routines or by engaging in self-care activities like journaling and hobbies), increased the odds of positive health related quality of life by 19% and 26% respectively. Having more community support increased positive health related quality of life odds by 20%, as did social support from friends (18%) and practicing forgiveness in relationships (15%).</p> <p>Quality assessment Strengths: Appropriate sample and selection process; validated measures used; clear and appropriate design, method and analyses of results. Weaknesses: Method and results not sufficiently described ; non- standardised questionnaires used</p> |

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| 4. Ben-Ami & Baker (2012) USA | Examined the long-term correlates of parental alienation on the psychological domains of self-sufficiency, life time prevalence of major depressive disorder, alcohol abuse, attachment style, and self-esteem. | Cross-sectional-survey | Participants were 118 adults recruited through advertising in the community and on divorce experience support groups on social media. Mean age 30. Subjects designated to the 'no-parental alienation group were those who endorsed the question, "Neither parent undermined my relationship with my other parent and I maintained a relationship with both of my parents."'. Control group: 59% female; 85% Caucasian; 44%; physically abused; 6.1% sexually abused. Parental alienation group; 72.5% female; 89.1% Caucasian; 40.6% ever married; 21% physically abused; 14.5% sexually abused. | Childhood abuse: Self report at interview. Attachment: Relationship Questionnaire (Bartholomew & Horowitz, 1991). Coping: self-report Rosenberg Self-Esteem Scale, RSE, (Rosenberg, 1965) Substance abuse: CAGE questionnaire (Ewing, 1984). | Compared to the control group the parental alienation group were significantly more likely to have low self-sufficiency scores ($p < .02$), more likely to meet the DSM criteria for lifetime major depression ($p < .03$), less likely to have a secure attachment style ($p < .02$), and have lower self-esteem ($p < .03$). The parental alienation group were not significantly more likely to score above cut off for substance abuse compared to the control group [$X^2 (2, N = 118) = 2.3, p = 0.16$], but were significantly more likely to be insecurely attached [$X^2 (2, N = 118) = 5.6, p = 0.02$]. Quality assessment Strengths: clear discussion and interpretation of results and limitations Weaknesses: self-selection bias; target population not clearly defined; non-standardised measures used; insufficient description of method and results |
| 5. Davis et al. (2004) USA | Adult attachment and current family relationship quality were examined as predictors of health behaviours and number of Metabolic Syndrome criteria met. | Cross sectional Survey & physical obs | 215 Participants recruited from either a) 30+ year longitudinal study on psychosocial functioning in adolescents (n=55), or b) matched group from community advertising (n=163). Mean age = 45.9 (SD=3.3). 52% female. 56% Black/African American | Childhood abuse: The Evaluation of Lifetime Stressors interview (Krinsley et al., 1997). Attachment: the Adult Attachment Interview (George et al., 1984). Coping: (Diet) The Block Food Frequency Questionnaire (Block et al., 1986); self-report of exercise; self-report- | Attachment coherence, unresolved status, diet and smoking emerged as direct predictor of health outcomes, and accounted for 21% of its variance. [$\chi^2(28) = 39.89, p > .01, RMSEA = .045$]. There were indirect and direct paths to the health outcomes from attachment variables. Lower coherence in attachment and unresolved status in attachment was positively associated to worse health outcomes. Indirect paths from incoherence of attachment to worse health outcomes through poor relationship quality were found. Higher idealisation in attachment scores was positively associated to worse health components through poorer diet. |

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| | | | | Smoking and alcohol use (packs per day and drinks per week). | Quality assessment Strengths: Appropriate sample and selection process; appropriate measures, design and analyses of results; attempts made to categorise non-responders Weaknesses: self-selection bias; lack of detail in basic data description |
| 6. Dishon- Brown et al. (2017) USA | Explored the relationship between childhood victimisation, attachment, coping, and substance abuse, and adult intimate partner violence in adults on parole and probation. | Cross sectional Interview and survey | Participants were 406 women on probation or parole. Recruited through adverts. Aged 19-69 (M=37.20). 50% white, 41.9% black, 7.6% Other. | Childhood abuse: Questions adapted from the National Crime Victimization Survey; Tolman's Psychological Maltreatment of Women Inventory (Tolman, 1999); and the Revised Conflict Tactics Scale (Tjaden & Thoennes, 2000). Attachment: Revised Adult Attachment Scale (Collin's, 1996). Coping: 4 subscales from Brief COPE (Carver, 1997). Substance abuse-Risk Behaviour assessment Tool (National Institute on Drug Abuse [NIDA], 1991) | High rates of intimate partner violence and high lifetime drug use was positively associated to higher rates of childhood sexual abuse, poor coping (substance use coping, and minimising coping). Higher intimate partner violence was positively associated to increased incidence of abuse, negative coping and anxious attachment style. The number of psychologically violent partners was associated with higher incidents of child sexual abuse, increased use of positive and negative coping, and increased regular lifetime drug use, as well as decreased use over the past two years predicted 10% of the variance. Quality assessment Strengths: Appropriate sample; validated measures used; clear and appropriate design, method and analyses; detailed description of data and results. Weaknesses: selection bias; lack of attempts to categorise non-responders |

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| 7. Elkit, (2009) ²¹ Denmark | Explored the relationship between PTSD, psychological distress, and risk factors among women sexually abused in childhood after six months in therapy. | Quasi-experimental design. Non-randomised. Matched pairs (Pre and post treatment) | The sample were 220 women. Participants fell in two groups (abused and non-abused. Participants in the abused group (n=70) were recruited through treatment centre for women sexually abused in childhood. Six months later (after treatment) 44% (n =30) remained in study. Mean age of the sample was 33.3 years (SD =10.5). All women were Caucasian. The comparison was 129 women also received outpatient psychological treatment. The mean age of 39.1 years (SD =12.9). | Childhood abuse: Self report at interview. Attachment: The Revised Adult Attachment Scale (Collins & Read, 1990). Coping: The Coping Styles Questionnaire (Roger et al., 1993). | All three attachment subscales measured at time point two were significantly associated to PTSD intensity: closeness ($r(29) = -0.51, p = 0.005$), and dependency ($r(27) = -0.48, p = 0.01$) were negatively correlated to PTSD intensity. Anxiety ($r(29) = 0.68, p = 0.0005$) was a positively correlated to PTSD intensity at time point two. Both emotional coping at time point one ($r(28) = 0.40, p = 0.05$) and two ($r(28) = 0.51, p = 0.005$) were positively associated to time point two PTSD intensity. Quality assessment Strengths: Appropriate sample and selection process; categorised non-responders; validated measures used; clear and appropriate design, method and analyses of results. Weaknesses: Method and analyses not sufficiently described; results not internally consistent |
| 8. Elkit (2015) Denmark | Investigated the changes in psychological domains associated with treatment in survivors of child sexual abuse. | Cohort study-experimental (pre and post treatment) | Participants were 480 outpatients entering treatment for childhood sexual abuse. 85% were women. The mean age of the sample was 36.4 years (SD = 10.8; range 15 to 70 years) and all participants were Caucasian. | Childhood abuse: Established in Interview Attachment: The Revised Adult Attachment Scale (Collins & Read, 1990). Coping: The Coping Styles Questionnaire (Roger et al., 1993). | Participants had high scores for avoidant and anxious attachment. Regression analysis showed that avoidant attachment style predicted PTSD after 12 months. Emotional coping was positively associated with PTSD severity after one year. Years in education, avoidant attachment, and emotional coping mediated the relationship between PTSD and childhood abuse (explained 48% of variance). Quality assessment Strengths: Appropriate sample and selection process; validated measures used; detailed description of method and analyses; clear and appropriate design, method and analyses of results. Weaknesses: no attempts to categorised non-responders; likely non-response bias |

²¹ Similarities in the findings from Elkit (2009) and Elkit (2015) suggest that they were drawn from the same sample, although Elkit's later study (Elkit, 2015) had a larger sample size.

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| 9. Herbert et al. (2018) Canada | Examined coping strategies as a mediator in the relationship between mother-child, father-child relationship, and outcomes following childhood sexual abuse. | Cross sectional-Survey | 505 children (339 girls and 166 boys) recruited through services for CSA. 6 to 13 years: mean age 8.98 (SD =1.93) for girls and 8.80 (SD 1.98) for boys. | <p>Childhood abuse: Established through attendance childhood sexual abuse clinics + demographics form.</p> <p>Attachment: Perception of Attachment Security in Mother-Child and Father-Child Relationship. An adaptation (Hébert, 2001) of the Kerns Security Scale (Kerns et al., 1996).</p> <p>Coping: The Self- Report Coping Scale (Causey & Dubow, 1992).</p> | <p>Less avoidant coping was associated with both security to father and mother for girls, whereas, in boys, avoidant coping was only associated with security to mother. In girls, security to mother and father significantly negatively correlated with avoidant coping. Security to mother was positively correlated with approach coping. In boys, security to father marginally positively correlated with approach coping while security to mother marginally negatively correlated with avoidant coping. Security to mother positively correlated to lower trauma symptoms and higher self-esteem through a lesser use of avoidant coping strategies, for girls ($b = -.26$, 95% bootstrap CI [-.46, -.09]) and boys ($b = -.25$, 95% bootstrap CI [-.56, -.03]), and for father PSS ($b = -.21$, 95% bootstrap CI [-.35, -.06]) for girls.</p> <p>Quality assessment</p> <p>Strengths: Appropriate sample and selection process; validated measures used; detailed description of method and analyses; clear and appropriate design, method and analyses of results.</p> <p>Weaknesses: no attempts to categorised non-responders; likely non-response bias</p> |
| 10. Hyland et al. (2018) Denmark | Examined the relationship between childhood abuse, coping, style, attachment, self-worth and psychiatric disorders. | Cross sectional-Survey | Participants were 420 adult victims of childhood sexual abuse within a treatment centre. 85% female. Mean age was 36.40 years (SD =10.80). All participants were Caucasian. | <p>Childhood abuse: Answered 'yes' or 'no' to 12 types of abuse.</p> <p>Attachment: The Revised Adult Attachment Scale (Collins, 1996). Coping: The Coping Style Questionnaire (Roger et al., 1993)</p> | <p>Psychiatric illness following child abuse was positively correlated with emotion-focused coping ($\beta = .42$, $p < .001$), and anxious attachments ($\beta = -.11$, $p < .05$). Externalizing coping style was positively correlated with traumatic life events ($\beta = .20$, $p < .05$), and avoidant coping ($\beta = .19$, $p < .05$). Thought disorder was positively correlated with avoidant coping ($\beta = .37$, $p < .001$), and anxious attachment style ($\beta = .15$, $p < .05$). Alcohol dependence and drug dependence were most strongly positively associated to externalizing.</p> <p>Quality assessment</p> |

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| | | | | | <p>Strengths: appropriate sample; validated measures used; detailed description in method, analyses and discussion; clear and appropriate design, method and analyses of results.</p> <p>Weaknesses: self-selection bias; no attempts to categorised non-responders; likely non-response bias; basic data not adequately described</p> |
| 11. Irwin, (1999) Australia | Examined the link between childhood abuse and re-victimisation in adulthood. | Cross sectional-survey | Participants were 155 adult women recruited through social and professional networks as a convenience sample. Mean age was 38.2 (SD=9.13). | <p>Childhood abuse: Childhood Trauma Questionnaire (CTQ) (Bernstein et al., 1994).</p> <p>Attachment: Relationship Scales Questionnaire (Griffin & Bartholomew, 1994).</p> <p>Coping: Ways of Coping Questionnaire (Folkman & Lazarus, 1988)</p> | <p>Lack of positive reappraisal mediated the relationship between violent re-victimisation and childhood abuse ($sr^2 = .017, p = .062$). Having a dismissing attachment style moderated ($sr^2 = .019, p = .057$) violent victimisation following physical abuse, and positive reappraisal significantly mediated ($sr^2 = .019, p = .052$) violent victimisation following physical abuse. Distancing ($sr^2 = .020, p = .035$), and accepting responsibility ($sr^2 = .018, p = .043$) positively correlated to nonviolent re-victimisation.</p> <p>Quality assessment</p> <p>Strengths: Appropriate sample and selection process; validated measures used; detailed description of method and analyses; clear and appropriate design, method and analyses of results.</p> <p>Weaknesses: unclear study aims; inappropriate sample selection; no attempts to categorised non-responders; likely non-response bias; some of standardised measures not used in full.</p> |
| 12. Karakurt et al. (2013) USA | Investigated the relationship between witnessing DV during childhood, attachment insecurity, egalitarian attitude within the relationship, and | Cross sectional-survey | 87 heterosexual couples, recruited through a university. Mean age 22.3 years (SD=4.80). European American 70 %, Asian 9 %, African American 8%, Hispanic 4%, Other 7%. | <p>Childhood abuse: Self report in interview.</p> <p>Attachment: Experiences in Close Relationships (Fraley et al., 2000) Relationship Questionnaire (Bartholomew and Horowitz 1991). Secure</p> | <p>Insecure attachment in both males ($r = 0.16, p < 0.01$) and females ($r = 0.46, p < 0.01$) positively correlated with poor coping. In women, then experience of degradation from their mum ($r = 0.16, p < 0.01$), but not dad, isolation from mum ($r = 0.518, p < 0.01$) but not dad and psychological aggression from mum ($r = 0.309, p < 0.01$) but not dad was positively correlated to insecure attachment. Experiencing physical and sexual abuse and parental conflict were not significant. In</p> |

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| | dating aggression. | | | Base Scriptedness (Coppola et al. 2006). Coping: Coping Inventory for Stressful Situations (Endler & Parker, 1990) | males experiencing degradation ($r=0.441, p < 0.01$), isolation ($r = 0.299, p < 0.01$) and psychological aggression ($r = 0.398, p < 0.01$) was positively correlated to insecure attachment. This pattern remained when the experience was from both mother and father. Experience of physical and sexual abuse, and parental conflict were not significantly correlated to insecure attachment. Quality assessment Strengths: Clear aims; validated measures used; detailed description of method and analyses; clear and appropriate design, method. Weaknesses: inappropriate and ill-defined sample; self-selection bias; no attempts to categorised non-responders; likely non-response bias; lack of detail in basic data description |
| 13. Limke et al. (2010) USA | Examined mediational effects of insecure attachment in college students with histories of childhood abuse compared to a control group. | Cross sectional Survey/ Interview | Participants were 356 undergraduate students put into three groups-emotionally maltreated (n=95), sexually maltreated (n=85), and matched non-maltreated control (n=176). 66% female. 92% White, non-Hispanic, 3% Black, 3% American Indian, 2% Asian. No age reported. | Childhood abuse: Life Experiences Questionnaire (Gibb et al., 2001). Attachment: Simpson's Attachment Scale (Simpson et al., 1992). Coping: The Ways of Coping Scale (Folkman et al., 1986) | Participant with childhood abuse experiences were significantly more avoidant and more anxious than were their non-maltreated counterparts ($F_s (1, 74) > 5.56, p_s < .05$). There were significant maltreatment effects for adjustment variables including coping styles (emotion focused coping), negative affectivity and defence styles (maladaptive action defences, image distorting defences, and splitting) ($F_s (1, 74) > 6.02, p_s < .05$). Anxious attachment but not avoidant attachment mediated the effects of childhood maltreatment on psychological adjustment. Quality assessment Strengths: Clear aims; clear and appropriate design, method; detailed description of method, analyses and discussion; matched control used; non-responders categorised; Weaknesses: likely non-response bias; authors did not report psychometric properties |

Chapter 1: Systematic Review

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| 14. Lynksey & Fergusson (1997) New Zealand | Examined attachment, coping, drug and alcohol use in those exposed to childhood sexual abuse who developed psychiatric disorder and those who did not. | Longitudinal | Participants were 1,025 adults who took part in the Christchurch Health and Development Study cohort longitudinal study (81% of original sample). No demographics reported. | Childhood abuse: established in interview: Attachment: Parental Attachment Scales (Armsden and Greenberg, 1987). The Parental Bonding Instrument (Parker et al., 1979). Coping: Alcohol and drug use; assessed by DSM-IV items. | <p>There were marginally positive correlations between rates of adjustment, difficulties following childhood sexual abuse, and a range of factors including parental attachment. The extent of adjustment difficulties were predicted by paternal attachment ($r = -.188$; $p < .05$).</p> <p>Quality assessment Strengths: Clear aims; clear and appropriate sample and selection process; non-responders categorised Weaknesses: some measures not validated; methods not adequately described; study limitations not discussed</p> |
| 15. Ma & Li, (2014) Hong Kong | Examined the role of attachment security and emotion dysregulation in the relationship between abuse and adjustment. | Cross sectional- | Participants were 647 children divided into three groups: 1) trauma group with repeated familial abuse ($n=82$); 2) trauma group with single event non abuse trauma ($n=83$); 3) control group with no trauma ($n=201$). Recruited through schools, psychology services, and social care services. Age ranged from 9-15 (mean age = 12.00, 12.04, and 12.30 years, respectively (SDs = 1.50, 1.37, 1.26). | Childhood abuse: answered yes/ no questions (for school sample), or therapist detailed nature of trauma (in clinical sample). Attachment and coping: The Preoccupied and Avoidant Coping scales (Yunger et al., 2005). | <p>The trauma group showed a significantly lower level of attachment security and higher scores in avoidant and disorganized attachment styles than the non-abused trauma group and no trauma controls ($p < .010$, Cohen's $d = 0.50$ & 0.53). They also had a higher level of inhibition coping than no trauma controls ($p < .010$), but no significant difference in coping style was found between the trauma and no trauma group.</p> <p>Quality assessment Strengths: Clear aims; appropriate sample base; appropriate and validated measures used; methods and analyses sufficiently described; clear and detailed interpretation and discussion Weaknesses: self-selection bias; no attempts to categorise non-responders; likely non-response bias</p> |

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| 16. Patoch- Peckham & Morgan- Lopez (2010) USA | Examined parental influences for pathological drinking and anti-social personality as pathways for alcohol misuse | Cross sectional-survey | Participants were 404 university students. 59% male, Mean age was 19.96 (SD=2.66). White 86%; African American 6%; Hispanic 2.5%; Asian 2.5%; Other 3% | <p>Childhood abuse: Perceived Parental Neglectfulness Scale adapted from (Gafoor & Kurukkan, 2014).</p> <p>Attachment: Parental bonding instrument (Parker et al., 1979).</p> <p>Coping: Alcohol use; The reasons for Drinking Alcohol Questionnaire Problems with Alcohol Use (Johnson et al., 1985).</p> | <p>For males high levels of father rejection were associated with higher pathological reasons for drinking, which led to more alcohol related problems (mediated effect= .0745, 95% CI [.0103, .1462]), and higher frequency drinking (mediated effect= .0384, 95% CI [.0002, .0911]). Similarly for women high levels of father rejection was associated with higher pathological reasons for drinking, which led to increased alcohol use (mediated effect = .0745, 95% CI [.0103, .1462]) and more alcohol related problems (mediated effect= .0185, 95% CI [.0021, .0435]).</p> <p>Quality assessment</p> <p>Strengths: Clear aims; clear and appropriate design, method; detailed description of method, analyses and discussion</p> <p>Weaknesses: non-representative sample; no attempts to categorise non-responders; self-selection bias and likely non-response bias</p> |
| 17. Perlman et al. (2016) USA | Investigated mediational pathway from childhood maltreatment to coping through attachment style. | Cross sectional-Survey | Participants were 225 undergraduate psychology students. 75.8% female. Mean age = 19.34 (SD=1.54). Caucasian (88.9%). | <p>Childhood abuse: Childhood Trauma Questionnaire (Bernstein et al., 2003). Attachment: The 12-item Experiences in Close Relationships–Short Form (Wei et al., 2007).</p> <p>Coping: Brief COPE (Carver, 1997).</p> | <p>Childhood physical abuse was significantly correlated to avoidance attachment ($b = .799$, $SE = .213$, $p < .001$), but not anxious attachment ($b = .262$, $SE = .203$, $p = .198$). Childhood emotional abuse was significantly correlated to both avoidance attachment ($b = .630$, $SE = .121$, $p < .001$) and anxious attachment ($b = .519$, $SE = .114$, $p < .001$). Attachment avoidance significantly mediated the relationship between physical and emotional abuse and less adaptive coping (physical abuse: indirect effect = $-.191$, 95% CI [$-.306$, $-.106$]; emotional abuse; indirect effect = $-.145$, 95% CI [$-.261$, $-.076$]). Attachment avoidance also mediated the relationship between physical abuse and more use of maladaptive coping (indirect effect = $-.112$, 95% CI [$-.54$, $-.190$]). Both avoidant attachment (indirect effect = $.085$, 95% CI [$.043$, $.140$]) and anxious attachment (indirect effect = $.102$, 95% CI [$.054$, $.171$]) mediated the relationship between childhood emotional abuse and maladaptive coping.</p> |

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| | | | | Strengths: Clear aims; clear and appropriate design, method; detailed description of method, analyses and discussion; standardised and validated measures used. Weaknesses: ;non-representative sample; no attempts to categorise non-responders; likely non-response bias; authors did not report psychometric properties | |
| 18. Shapiro & Levendosky (1999) USA | Examined attachment style and coping strategies as mediating variables between childhood sexual abuse and psychological and interpersonal functioning. | Cross sectional – Survey | Participants were 80 adolescent females recruited through DV shelters, at-risk teen programs, social services agency and community. Mean age 14.96 years (SD 0.83): 51% Caucasian, 21.3% African American, 15% Biracial, 10% Hispanic/Latina, 1.3% Asian American, and 1.3% other. Categorised into abused (CSA) and non-abused group. | Childhood abuse: Childhood Trauma Questionnaire (Bernstein et al., 1994); Characteristics of Abuse questionnaire (developed for this study and adapted from (Westerlund, 1992). Attachment: Adult Attachment Scale (Modified version; Collins & Read, 1990). Coping: the COPE (Carver, Scheier, & Weintraub, 1989) | There were direct effects of childhood sexual abuse on avoidant coping and indirect effects of childhood abuse on avoidant coping through attachment. The mediating role of attachment accounted for the majority of the effects of sexual abuse on psychological distress. There was a direct effect of attachment on psychological distress following childhood abuse and a small indirect effect in this relationship through avoidant coping. There was a small indirect effect through attachment in the relationship between childhood sexual abuse and cognitive coping. The relationship between childhood sexual abuse and both cognitive coping and interpersonal conflict was mediated by attachment. Quality assessment Strengths: Clear aims; appropriate sample base clear and appropriate design, method; detailed description of method, analyses and discussion; matched control used; non-responders categorised Weaknesses: ;self-selection bias; likely non-response bias; no attempts to categorise non-responders; some measures adapted without piloting |

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| 19. Stover et al. (2013) USA | Compared parenting behaviours of men with substance misuse and intimate partner violence with control group. Examined differences in parenting behaviour as mediator. | Cross sectional-Survey | 86 fathers of children aged 2-6 years of age were recruited. The substance abuse, and intimate partner violence group were recruited through a substance abuse treatment team (n=43). A control group was recruited through community adverts (n=43). 18.6% European American, 57% African American, 14% Latino, 10.5% other or multi-ethnic. Mean age of 34.69 (SD = 9.19). | Childhood abuse: Childhood Trauma Questionnaire-Short Form (Bernstein et al., 2003). Attachment: Experiences in Close Relationships Revised (Fraley et al., 2000). Coping: The Difficulties with Emotional Regulation (has coping subscale) (Gratz & Roemer, 2004). The Fatherhood and Substance Abuse Structured Research Interview (McMahon et al., 2008). | Fathers from the substance abuse and intimate partner violence group reported significantly more difficulties in their adult attachment relationships than the control group, both for attachment anxiety ($f = 11.70, p < 0.01$) and avoidance ($f = 19.66, p < 0.001$). Attachment anxiety ($r = 0.257, p < 0.05$), and avoidance ($r = 0.392, p < 0.01$) were positively correlated with poor parenting. Quality assessment Strengths: appropriate sample base; Clear aims; clear and appropriate design, method; detailed description of method, analyses and discussion; matched control used; standardised and validated measures used Weaknesses: no attempts to categorise non-responders; likely non-response bias |
| 20. Winham et al. (2015) USA | Investigating the mediating role of attachment in the relationships between childhood victimization and psychological distress, and between childhood victimization and substance use. | Cross sectional-Survey | 406, women on parole or probation (parole lists emailed and adverts in community). Mean age 37.3 years (SD=10.18). White 50.5%; African American/Black 41.6% | Childhood abuse: Frequency was established via an adapted scale from Mullings et al. (2003) study. Adapted Revised Conflict Tactics Scale (Straus et al., 1996). Psychological Maltreatment of Women Inventory (Tolman, 1989). Attachment: 18-item Revised Adult Attachment Scale (Collins & Read's, 1990). Coping: Substance Use: Items adapted from Coyle's Risk Behaviour Assessment (Coyle, 1993) | 72% of the sample overall had an insecure attachment. The relationship between childhood victimisation and substance use was not significant ($B = .00, \beta = .00, p = .10$). There was a significant relationship between childhood victimization and greater attachment insecurity ($B = .11, \beta = .33, p < .001$). Childhood victimization accounted for 11% of the variance in attachment insecurity, and there was a positive association between insecure attachment and substance use ($B = .15, \beta = .26, p = .002$). Quality assessment Strengths: Clear aims; clear and appropriate design, method; detailed description of method, analyses and discussion; matched control used; non-responders categorised; Weaknesses: self-selection bias; likely non-response bias; Some measures adapted without piloting |

1.2.3 Methodological Quality

Recent systematic review guidelines have suggested that quality assessment tools that are specific to the needs of the review should be utilised (Dignen, 2009; Higgins & Green, 2011). Given that the majority of the studies included within this review utilised a cross sectional design (n=17), the AXIS Critical Appraisal Tool for Cross Sectional Studies²² (Downes, Brennan, Williams & Dean, 2016) was selected to address the specific details and bias risks within these studies.

Appendix D provides a detailed description of the quality assessment results for the studies included within the present review. These results are summarised for each study within Table 2. Overall methodological quality across the studies varied. Despite many of the studies having large sample sizes, only three of the studies (Limke et al., 2010; Lynksey & Fergusson, 1997; Shapiro & Levendosky, 1999) justified their sample size in the context of statistical power and effect size. On the other hand, all but one of the studies (Banyard et al., 2017) were clear about what was used to determine statistical significance and precision estimates.

The AXIS tool revealed that the majority of the included studies (n=15) made appropriate steps to recruit participants that were representative to the target population under investigation, improving generalisability of the results. Six studies were considered not to recruit a representative sample. This was largely due to the reliance on undergraduate participants (n=5) when measuring childhood abuse outcomes. On the other hand, an undergraduate population was deemed appropriate in Banyard & Canter's (2004) study, wherein the aims were to explore adjustment to college in childhood abuse survivors. The issue of self-selection bias was common across many of the studies (n=13), creating difficulties in determining causal relationships.

All of the studies were deemed to employ assessment tools appropriate to the aims of their research, and the majority of the measures used across studies were robustly validated with reported levels of internal consistency (Cronbach's $\alpha > 0.7$; Kline, 2000). Exceptions to this were found across eight studies where assessment tools were either developed or adapted for the purpose of the study without prior piloting (Backer-Fulghum et al., 2012; Ben-Ami & Baker, 2012; Irwin, 1999; Patock-Peckham & Morgan Lopez, 2010; Shapiro & Levendosky, 1999). Internal

²² The AXIS tool (Downes et al., 2016) allows the bias assessment to be fully reported and transparent to the reader through the use of a fully reported 'checklist'. Such checklists have been recommended over tools that use overall summary scores (Higgins & Green, 2011) which can be difficult to justify and have been found to be unreliable (Juni, Wischi, Bloch & Egger, 1999).

consistency was not reported in two of the included studies (Limke et al., 2010; Lynksey & Fergusson, 1997).

All of the included studies justified their discussions and conclusions based on their presented results. Furthermore, all but one study (Lynksey & Fergusson, 1997) explored the limitations relating to the research process. Limitations included issues relating to the sample size and sample representation and results. Indeed, cross-sectional studies are limited in that both the causality and direction of the relationship cannot be implied. This limitation was explicitly discussed in the all of the studies that employed this design.

1.3 Results

The studies summarised in Table 2 will be discussed within the context of the present review question. The mechanisms accounting for these associations will be described where these are available. Across the studies, coping and attachment were measured as mediating variables²³, dependent variables²⁴, or both. The results will therefore be grouped into ‘the role of childhood abuse’, ‘the role of attachment’ and ‘the role of coping’. Furthermore, the majority of attachment measures used were underpinned by either attachment anxiety or attachment avoidance classifications. As such, the articles will be discussed within these domains where possible.

1.3.1 The Role of Childhood Abuse

Of the 20 studies included within the review, 16 explored direct relationships between childhood abuse, attachment and/or coping. Of these studies, four compared such effects across different categories of abuse. Results indicated that childhood abuse was related to both attachment insecurity and maladaptive coping, and both attachment insecurity and coping were found to mediate the relationship between childhood abuse and negative outcomes. However, the range of assessment tools used to measure both attachment style and coping limited the comparisons that could be drawn. Moreover, the issue of measuring the broad domains of coping across studies was raised.

1.3.1.1 The Role of Childhood Abuse on Attachment

Childhood abuse was consistently correlated to attachment insecurity. This was found across age ranges, in both studies observing children and adolescents (Herbert et al., 2018; Ma & Li, 2014; Shapiro & Levendosky, 1999), and across adult populations including undergraduates (Limke et al., 2010; Perlman et al., 2016), community samples (Ben-Ami & Baker, 2012; Lynksey & Fergusson, 1997), clinical samples (Elkit, 2009; Elkit, 2015) and in women on probation or parole (Dishon- Brown et al., 2017; Winham et al., 2015).

Both anxious and avoidant attachment patterns were associated with childhood abuse in the majority of the studies. In studies that measured different forms of abuse, high rates of both anxious and avoidant attachment styles were associated with emotional abuse (Limke et al., 2010)

²³ Mediating variable refers to variables that account for the relationship between a predictor and an outcome. Mediator variables explain why or how an effect or relationship between variables occurs (e.g. how attachment explains the relationship between childhood abuse and coping).

²⁴ Dependent variable refers to variables measured as a direct response to the independent variable (e.g. how child abuse affects coping).

and sexual abuse (Elkit, 2009; Elkit, 2015; Limke et al., 2010). However, Perlman et al. (2016) found that physical abuse was associated with avoidant but not anxious attachment styles, and emotional abuse was associated with both avoidant and anxious attachment styles in undergraduates. This indicates that different pathways to attachment insecurity may develop based on type of abuse experiences. However, given the difficulty of assessing abuse categories in isolation, this relationship is unclear. Both the Elkit (2009) and Elkit (2015) study benefitted from using an experimental design with clinical samples, improving the validity and generalisability of the results. This was compared to Limke et al. (2010) and Perlman et al. (2016) whose studies were limited by their reliance on undergraduate samples.

Some gender differences were found across the studies. Firstly, Herbert (2018) found higher level of security to mothers, compared to fathers in both male and female victims of childhood sexual abuse. Banyard and Canter (2014) found higher levels of maternal attachment security in females compared to males. Karakurt et al. (2013) explored the pathways of attachment to both mother and father separately, using structural equation modelling. They found differences in attachment patterns for females and males relating to whether abuse occurred from the mother or father. The results showed that for females, attachment insecurity was associated with abuse incurred from mother, whereas for males, attachment insecurity was associated with experiencing abuse from either parent. All of the studies except for Karakurt et al. (2013) benefitted from a sample frame taken from an appropriate population base. However limitations across the studies included a lack of categorisation of non-responders and high risk of non-response and selection bias.

1.3.1.2 The Role of Childhood Abuse on Coping

Across the eight studies that explored the effect of childhood abuse on coping styles, most suggest a correlation between childhood abuse and maladaptive coping. However, issues around the measurement of coping domains were found.

Child abuse was correlated with alcohol misuse in both undergraduate samples (Backer-Fulghum, et al., 2012; Patock-Peckham et al., 2010) and in a longitudinal study (Lynksey & Fergusson, 1997). Furthermore, Dishon-Brown et al. (2017) found that high rates of childhood sexual abuse related to high rates of lifetime drug use²⁵ in women on parole. Limitations of the studies included the use of inappropriate sample base (i.e. undergraduates) and issues with self-selection, although Lynksey and Fergusson (1997) made fair attempts to categorise non-

²⁵ As measured by the Substance Abuse- Risk Behaviour Assessment Tool (National Institute on Drug Abuse, 1991).

responders. Despite this, the results consistently indicate a correlation between child abuse and coping through alcohol and drug use. Comparatively, Winham et al. (2015) examined a similar population but found no significant relationship between childhood abuse and substance misuse²⁶, however the adapted measure was not standardised before use in this study. Interestingly, although no significant relationship was found between childhood abuse and substance misuse, the authors found significant pathways between childhood abuse and insecure attachment and between insecure attachment and substance use (Winham et al., 2015), perhaps highlighting a more complex interaction.

Correlations were also found between childhood abuse and other domains of coping that are typically classified as 'maladaptive' including; a minimising coping style (Dishon- Brown et al., 2017), emotion focussed coping (Limke et al., 2010), avoidant coping (Hyland et al., 2018; Shapiro & Levendosky, 1999) and inhibition coping (Ma & Li, 2014). Perlman et al. (2016) found childhood emotional abuse was associated with all maladaptive coping domains²⁷, as measured from a factor analyses of the brief COPE (Carver, 1997), whereas childhood physical abuse was associated with only the substance misuse component. Shapiro and Levendosky (1999) showed a direct effect of child sexual abuse on avoidant coping²⁸. Results from an oblique principal component analyses conducted on the 15 subscales of the COPE revealed only three coping factors (active, avoidant and cognitive coping; Shapiro & Levendosky, 1999). Interestingly, the coping factors revealed within analyses are not consistent with the previous factor analyses of the COPE in similar populations (see Phelps & Jarvis, 1994), making interpretation of results within the context of previous findings more difficult. Furthermore Shapiro and Levendosky (1999) utilised a measure of childhood abuse adapted for the study without prior piloting, which raises concerns about reliability and validity.

The literature employed various assessment tools for measuring coping style following childhood abuse (see Appendix C), meaning a variety of coping behaviours were explored. Within the tools, coping responses were clustered across a range of coping domains including; approach versus avoidant coping (Herbert et al., 2018); and emotion focussed verses problem focussed coping (Limke et al., 2010). Where broader measures of multidimensional coping were employed (e.g. the COPE; Carver et al., 1989; and the Brief COPE; Carver, 1997), factor analyses were used within studies to establish correlated variables of coping in victims of childhood abuse (Dishon- Brown et al., 2017; Perlman et al., 2016; Shapiro & Levendosky, 1999). However, the analyses from

²⁶ As measured by an adapted version of the Coyle's Risk Behaviour Assessment (Coyle, 1993)

²⁷ Made up of substance use, behavioural disengagement, and self-blame domains.

²⁸ As assessed by the COPE (Carver et al., 1989)

each study revealed different coping factors for the samples examined. Although the literature indicates a correlation between childhood abuse and maladaptive coping styles, it is difficult to compare results due to the issues surrounding measuring and categorising the various dimensions of coping processes (Rexrode, Petersen & O'Tool, 2008).

1.3.2 The Role of Attachment

Eighteen of the included articles observed the effects of attachment as a mediating variable in the relationship between childhood abuse and negative outcomes. Most suggest attachment is a significant mediator in this relationship. Many of the studies explored attachment style as a mediator in the relationship between childhood abuse and maladaptive coping specifically. Each of these studies found a significant relationship between these factors, either through increased use of maladaptive coping or decreased use of adaptive coping. Differences in these relationships were observed for males and females and across avoidant and anxious attachment style.

Attachment insecurity was found to mediate the relationship between childhood abuse and a range of negative outcomes including psychological distress (Shapiro & Levendosky, 1999; Winham et al., 2015), psychiatric illness (Hyland et al., 2018), PTSD (Elkit, 2009; Elkit, 2015), re-victimisation in adulthood (Irwin, 1999), aggression and withdrawal (Ma & Li, 2014), poor self-esteem (Herbert et al., 2018), interpersonal conflict (Shapiro & Levendosky, 1999), poor parenting (Stover et al., 2013) and metabolic syndrome (Davis et al., 2004).

Attachment insecurity was associated with maladaptive coping overall (Perlman et al., 2016) and with specific domains of coping including substance misuse (Dishon-Brown et al., 2017), and emotional focussed coping (Limke, 2010). Avoidant coping was most consistently correlated with attachment insecurity across samples of children (Herbert et al., 2018), adolescents (Shapiro & Levendosky, 1999) and adults (Hyland et al., 2018) who had experienced childhood sexual abuse. Moreover, Hyland et al. (2018) found a specific pathway between anxious attachment style and avoidant coping following childhood sexual abuse. These studies used sample frames taken from population bases that closely represent the target population overall, and showed consistent results for a positive relationship between childhood abuse and maladaptive coping domains. However, a high proportion of the samples were female and only sexual abuse was measured, highlighting the need for further investigation which focusses on multi-form abuse and the male experience.

Herbert et al. (2018) examined gender differences in attachment and coping in boys and girls who had experienced childhood sexual abuse²⁹. The results indicate that secure attachment to a same sex parent promotes approach coping over avoidant coping. Both Patock-Peckham & Morgan-Lopez (2010) and Backer- Fulghum et al. (2012) found associations between father rejection and problem alcohol use. Conversely, the authors found that care from mother protected from pathological reasons for drinking, suggesting that mothers and fathers play different roles in supporting their children following childhood sexual abuse; specifically that the same sex parents may be pivotal in enhancing positive coping strategies. Longitudinal research is required to ascertain if perceived security to the mother and father figures is a predictor of long-term outcomes.

Although results indicate the presences of gender differences in the relationship between childhood abuse, attachment and coping, these have not been rigorously examined. The majority of the research has used cross sectional designs and has focussed on the experience of childhood sexual abuse, highlighting the need for broader research in this area.

1.3.3 The Role of Coping

Of the 20 included studies, eight examined the effects of coping as a mediating variable on relationships between childhood abuse and negative outcomes. The majority suggested that coping played an important role, although the variety of coping domains measured made it difficult to compare results across.

Similarly to attachment style, maladaptive coping was found to mediate the relationship between childhood abuse and a range of factors including; psychiatric illness (Hyland et al., 2018), psychological distress (Shapiro & Levendosky, 1999), PTSD severity (Elkit, 2009; Elkit, 2015), interpersonal conflict (Shapiro & Levendosky, 1999), violent and non-violent re-victimisation (Irwin, 1999), quality of life (Banyard et al., 2017) and metabolic syndrome (Davis et al., 2004). Inversely, coping factors such as meaning making³⁰ were shown to increase the odds of positive quality of life by 19% and 26% respectively (Banyard et al., 2017).

Irwin (1999) used the Ways of Coping Questionnaire (Folkman & Lazarus, 1988) to examine coping factors within the broader categories of adaptive and maladaptive coping³¹. They found that coping responses within the maladaptive category were associated to violent and non-violent

²⁹ Sexual abuse from someone other than their parents.

³⁰ I.e. by following traditions and routines, or by engaging in self-care activities.

³¹ I.e. Confrontive coping, distancing, self-controlling, social support seeking, accepting responsibility and escape/avoidance.

re-victimisation. Avoidant coping was also associated with psychopathology, including PTSD and low self-esteem (Herbert et al., 2018), interpersonal conflict (Shapiro & Levendosky, 1999), externalising (Hyland et al., 2018) and attachment insecurity (Herbert et al., 2018). This suggests that avoidant coping in particular may be implicated in the development of psychological difficulties following childhood sexual abuse.

1.4 Critical Review and Discussion

1.4.1 Summary of Results

The 20 studies included within the review examined relationships between childhood abuse, attachment and coping. There were no set parameters on the date of publication for the review, however all of the available studies that met criteria for inclusion were within the last 20 years, reflecting the considerable growth in interest in this field. The review identified considerable advances in the understanding of the mechanisms underlying the relationship between childhood abuse and negative outcomes. Furthermore, the role of attachment and coping were implicated within this relationship, although limitations in the research methodology existed.

Childhood abuse was consistently associated with a range of negative outcomes. Childhood abuse strongly correlated to both anxious and avoidant attachment styles. This was demonstrated in groups of individuals who were emotionally maltreated (Limke et al., 2010; Perlman et al., 2016) and sexually maltreated (Elkit, 2009; Elkit, 2015; Limke et al., 2010). However, physical abuse was found to significantly correlate to avoidant but not anxious attachment (Perlman et al., 2016), which is consistent with the body of literature suggesting that different abuse experiences lead to different patterns of affect regulation (Mikulincer et al., 2003; Shaver & Mikulincer, 2002).

The relationship between childhood abuse and maladapted coping reflected more complexity. Many of the studies observed links between childhood abuse and maladaptive coping, which is consistent with the body of literature linking experiences of maltreatment to increased maladaptive coping later in life (Hyman, Paliwal & Sinha, 2007; Walsh et al., 2010). However, two studies comparing groups of abused and non-abused individuals found no significant differences in coping between groups (Banyard & Canter, 2004; Winham et al., 2015). Indeed, the variety of tools employed to assess coping, as well as differences in the ways in which coping responses were subsequently grouped, made comparisons between the studies limited (see limitations). Despite this, the majority of studies indicated a relationship between childhood abuse and different domains of maladaptive coping.

Attachment style was consistently found mediate the relationship between childhood abuse and maladaptive coping. Results indicate that particular pathways exist between insecure attachment (Hyland et al., 2018; Perlman et al., 2016; Shapiro & Levendosky, 1999) and more specifically anxious attachment (Hyland et al., 2018) on avoidant coping. However, many of these

studies focussed on the experience of childhood sexual abuse and the samples were largely female.

Within the limited studies that compared male and female victims of abuse, significant gender differences were found. In a study investigating reactions to parental rejection, males were found to use more alcohol as a coping strategy than females (Backer- Fulghum et al., 2012; Patock-Peckham & Morgan-Lopez, 2010). Security to the same sex parent was also significantly correlated with better coping, indicating that the same sex parents may be pivotal in enhancing positive coping strategies in individuals who have experienced abuse.

Several domains of coping were implicated in the relationship between childhood abuse and negative outcomes. Maladaptive coping was consistently correlated to range of negative consequences including low self-esteem, interpersonal conflict and PTSD. Within the broader maladaptive domain, avoidant coping was most consistently associated with negative outcomes. However, these patterns were only examined in samples that had experienced sexual abuse in studies with relatively small sample sizes. This highlights the need for further examination of coping styles across abuse domains.

1.4.2 Limitations

The review was limited by several factors relating to research methodology and conceptual issues. The studies measured a range of abuse categories including physical, emotional, sexual, neglect, and witnessing DV, and many of the studies measured outcomes of different forms of abuse concurrently. However, some grouped participants into abuse categories or focused on the measurement of one form of abuse in isolation. This creates a challenge in comparing results across the studies. Furthermore, it has been highlighted that the experience of abuse is rarely isolated (Arata et al., 2007; Finkelhor et al., 2009; Herrenkohl & Herrenkohl, 2009), so the validity of results coming from assessment of isolated abuse categories may be compromised.

The wide variety of self-report assessment tools made it difficult to draw robust conclusions. Although most attachment measures mapped insecurity onto domains of anxiety and avoidance, some of the tools separated anxious attachment into anxious-avoidant and anxious-ambivalent³² and other measurements separated avoidant attachment into dismissing and fearful³³. Further to this, the majority of the self-reported attachment scales used a categorical

³² As seen in Strange Situation (Ainsworth et al., 1978).

³³ E.g. Relationship Scales Questionnaire (Griffin & Bartholomew, 1994).

measurement of attachment, meaning that participants were grouped as either one attachment style or another. This form of assessment has limitations as it fails to capture individual differences and has been shown to hold limited empirical support (Fraley & Waller, 1998). Further to this, the quality assessment revealed that eight of the studies used measurements that had not previously been trialled, piloted or published.

The conceptualisation and measurement of coping posed significant difficulties for the review. Coping was measured and grouped inconsistently across the studies. This mirrors the ambiguity in the literature surrounding the use of concrete categories of coping (Skinner, 2003) and highlights the related issues of validity and reliability of coping scales (De Ridder, 1997; Stone, Kennedy-Moore, Newman, Greenberg & Neale, 1992). There are also conceptual issues relating to whether coping is defined as a process or a style (De Ridder, 1997). Although it is widely agreed that coping is dynamic process and context dependent, the vast number of recorded coping responses means that research tends to reduce responses into categorical dimensions (De Ridder, 1997; Rexrode et al., 2008), as seen within this review.

The review included studies on both children and adults, making comparisons more complex. Early research on attachment organisation proposed that attachment style remains relatively stable across their lifetime and that IWMs become increasingly resistant to change over time (Bowlby, 1973). However, others have argued that secure attachments can later develop following early negative experiences and insecure relationships (Mikulincer & Shaver, 2007). There are a variety of factors that may impact a change from insecure to secure, including socioeconomic background and the presence of alternative supportive relationships (Saunders, 2011). Given that the majority of studies employed a cross-sectional design the attachment stability in the samples measured cannot be determined.

The review included studies with clinical, community and undergraduate samples. Student samples are inherently biased in age, experience, intellectual ability, ethnicity and social class, creating issues in the generalisability of the findings from these studies. Comparing undergraduates and clinical samples is thus intrinsically flawed due to heterogeneity between the groups. Furthermore, it could be argued that because undergraduate populations are succeeding, as defined by our socially determined narratives, they are more likely to be operating with adaptive coping and emotional regulation patterns. Across the clinical samples, participants were majority, or entirely female and childhood sexual abuse was the most consistently assessed. This means that the results relating to attachment and coping cannot be generalised to the wider population of childhood abuse survivors. Furthermore, the sample size of clinical samples was

considerably lower than that of undergraduate populations, which undermines the internal and external validity of the findings. The majority of the studies used a cross sectional design, with correlational and regression analyses, limiting the ability to infer causality. The majority of the studies did not categorise non-responders, a common issue within cross sectional studies. Non-responders may be from a specific group, which can lead to a shift in the baseline data away from the target group, leading to non-response bias. Similarly, given that most of the studies used opportunity sampling methods, the risk of self-selection bias was high.

1.4.3 Future Research Considerations

Future research would benefit from a holistic approach to assessing childhood abuse experiences when considering the relationship between abuse, attachment and coping. The robust assessment of multi-form abuse may provide clarity on the specific pathways between abuse experience and the range of attachment and coping dimensions. Given the documented relationship between social-economic factors and childhood abuse, future research would benefit from using a representative sample from this demographic. This would add weight to the present findings that there is a significant relationship between childhood abuse, attachment insecurity and maladaptive coping. Furthermore, the inclusion of males within research on childhood abuse would allow for further examination of gender differences in the pathway from abuse to negative outcomes.

Similarly, the use of dimensional measures of attachment (e.g. the Experience in Close Relationship Revised; Fraley et al., 2000) would allow for greater consideration of individual differences within this population. Further to this, there was an over-reliance on retrospective and self-report measures, which has been shown to be biased by the experience of abuse (Fergusson, Horwood & Woodward, 2000) and insecure attachment styles (Cassidy, 1994). Future research may benefit from the inclusion of other assessment tools to measure attachment style (e.g. behavioural and physiological measures; Mikulincer & Shaver, 2007). The use of such additional measures would help to corroborate the results from the present review. Similarly, longitudinal research would build further confidence in the findings through establishing patterns of attachment and coping over time. This would also add useful insights to the debate around attachment stability.

Research should also consider the use of robust measurements of coping that allows for a range of dimensional coping responses to be assessed as dynamic processes (e.g. the COPE; Carver et al., 1989). Furthermore, caution should be applied when clustering coping responses across pre-

determined categories. Measuring and categorising coping processes more vigorously would allow for a more consistent comparison across studies, allowing more robust conclusions to be drawn. Finally, more extensive research that compares attachment and coping patterns across males and females is required.

1.4.4 Clinical Implications

The studies included in this review indicate a relationship between childhood abuse, attachment and coping. Although causation cannot be determined, the findings could provide guidance for clinicians when working with both children and adults who have experienced abuse.

Firstly, results consistently showed associations between childhood abuse and insecure attachment, and insecure attachment and maladaptive coping. As such, interventions that focus on improving attachment relationships could be beneficial for this population (Becker-Weidman & Hughes, 2008). Early intervention is likely to be beneficial given that IWMs are suggested to become more entrenched over time (Bowlby, 1973). Parenting programmes that target areas of risk and build protective factors are likely to have something to offer for the parents or carers supporting children who have experienced abuse. Such programmes help promote warm, sensitive and consistent parenting, which is conducive to the development of a secure attachment style. The literature widely recognises the value of evidence based parenting programmes, for example the 'Incredible Years Parenting Programme' (Gardner, Burton & Klimes, 2006; Patterson et al., 2002), which is based on attachment theory and behavioural learning.

There is emerging evidence to suggest that attachment style can be changed over time and that security can be 'earned' later in life (Saunders et al., 2011). This highlights the importance of considering attachment interventions for adults who have experienced childhood abuse. Indeed, it has been suggested that attachment can change in the context of a therapeutic relationship (Smith, Msetfi & Golding, 2010), within positive therapeutic relationships (Smith et al., 2010), and following interventions (Elklit, 2009). Adults who have experienced childhood abuse may therefore benefit from interventions that focus on relational factors such as warmth, validation and consistency. Such qualities in the therapeutic relationships have been related to more positive outcomes, regardless of therapy modality (Martin, Garske & Davis, 2000). Moreover the therapist may offer an alternative attachment-like figure with whom the client can build a trusting relationship, which may in turn promote positive views of self within the client (Egeland, Jacobvitz & Sroufe, 1988).

Similarly, maladaptive coping has been implicated in the relationship between childhood abuse and a range of negative consequences, indicating that negative coping further perpetuates the difficulties experienced by victims of abuse. Psychological interventions that build one's coping resources following early traumatic experiences are thus likely to be crucial. In addition to a focus on the therapeutic relationship, survivors of childhood abuse may benefit from skills based therapeutic models, such as Cognitive Behavioural Therapy (Beck, 1976), Acceptance and Commitment Therapy (Hayes, 2004) or Dialectical Behaviour Therapy (Linehan, 1993). These may enhance adaptive coping following childhood abuse, through a focus on developing techniques that improve skills in problem solving, emotional regulation, counteracting avoidance and cognitive restructuring.

1.4.5 Conclusion

This review aimed to identify, appraise and synthesise current literature investigating the relationship between childhood abuse, attachment and coping. The results indicate that there is a significant relationship between childhood abuse, attachment insecurity (both attachment anxiety and attachment avoidance) and maladaptive coping. Particularly strong relationships were found between childhood abuse and both anxious and avoidant attachment, and between insecure attachment and avoidant coping domains. Avoidant coping and lower use of approach coping were consistently correlated to a range of negative consequences including low self-esteem, interpersonal conflict and PTSD. Tentative gender differences were noted with regards to coping domains, specifically the use of alcohol to cope in men, and across attachment patterns which indicated that relationships with same sex parents are particularly protective. A number of limitations were noted, particularly with regards to inconsistent assessment of coping domains and the focus on female and undergraduate samples, highlighting the need for further research using robust measures and longitudinal designs. Despite this the results indicate that interventions aimed at improving attachment security and adaptive coping will be beneficial for individuals who have experienced childhood abuse.

Chapter 2: Empirical Paper

The Association between Childhood Abuse and Coping Strategies in Care Leavers: The Role of Attachment and Early Maladaptive Schemas

2.1 Introduction

2.1.1 Care Leavers

Epidemiological studies have revealed that looked after children³⁴ (LAC) in the UK fare worse than their peers across a variety of domains including; educational attainment (Fletcher, Strand & Thomas, 2015; O'Higgins, Sebba & Luke, 2015), mental health (Beagley, Hann & Al-Bustani, 2014; Memarzia, St Clair & Owens, 2015; Minnis, Everett, Pelosi & Dunn, 2006); physical health (Care Leaver Strategy, 2013) and criminality (Prison Reform Trust, 2017). Many LAC have faced significant trauma, placement instability and a lack of support network (Oakly, Miscambell & Gregorian, 2018). As a result LAC are widely recognised as some of the most vulnerable members of society (Care Quality Commission, 2016; McAuley & Davis, 2009).

In the transition to adulthood LAC again face significant adversity, and the quality of support care leavers³⁵ receive has been criticised for being irregular and inconsistent (Care Leaver Strategy, 2013). In 2013, the Care Leaver Strategy reported that 34% of all care leavers were not in education, employment or training (NEET) at age 19, compared to 15.5% in the general population. Furthermore, for individuals classified as NEET, there is an elevated risk of social exclusion, drug abuse and criminality (Schofield, Biggart, Ward & Larsson, 2015; Ward, Henderson & Pearson, 2003). Indeed, it has been highlighted that care leavers are 88 times more likely to be involved in drug use, 50 times more likely to go to prison, and 60 times more likely to be homeless than non-care-leavers (Bernados, 2014). They are also more likely to experience psychological difficulties (Broad, 1999; Dixon, Wade, Byford, Weatherly & Lee, 2006; Teyhan, Wijedasa & Macleod, 2018). However, the evidence indicates that care leavers often do not receive the mental health support

³⁴ Looked after children' (LAC) also known as 'children in public care' are children placed with foster carers, in residential homes or with parents or other relatives (Children Act, 1989).

³⁵ A care leaver is any adult who spent time in care as a child (Care Leavers Association).

they need (Phillips, 1997), and when they do they are likely to struggle to engage consistently (Lamont, Harland, Atkinson & White, 2009).

2.1.2 Care Leavers and Childhood Abuse

There are a variety of reasons why children enter care including: exposure to abuse or parental illness (NSPCC, 2019). In 2014, 55% of LAC in England entered care primarily due to exposure to childhood abuse³⁶ (Department for Education, 2014). However, it can be assumed that the reasons for entering care are complex and some form of abuse is likely to have been associated (Bazalgette, Rahilly & Trevelyan, 2015). Hobbs et al. (1999) revealed that, prior to entering care, LAC were seven to eight times more likely to have experienced physical abuse and six times more likely to have experienced sexual abuse than the general population. This puts LAC at a high risk for complex emotional and mental health needs (Bazalgette et al., 2015).

Severity of abuse has been associated with worse outcomes for victims of childhood abuse (Anda et al., 2006; Greene et al., 2014). However it is not severity alone that impacts these outcomes; the duration of time spent in an abusive environment has been found to inversely relate to recovery outcomes for care leavers (Selwyn, Frazer & Quinton, 2006). Indeed, better emotional wellbeing has also been associated with entering care at a younger age (Biehal, Ellison, Baker & Sinclair, 2009; Hannon, Wood & Bazalgette, 2010; Sempik, Ward & Darker, 2008). Conversely, placement instability can further exacerbate psychological difficulties experienced by this group (Hannon et al., 2010).

Childhood abuse has been associated with a range of mental health difficulties (Ball & Links, 2009; McFetridge, Milner, Gavin & Levita, 2015; Zanarini, 2000) including PTSD (Briere, Hodges & Godbout, 2010), depression and anxiety (Beitchman et al., 1992; Putnam, 2003) and personality disorder (Spataro, Mullen, Burgess, Wells & Moss, 2004). However, there is no one mental health category which integrates the full spectrum of difficulties that victims of abuse may experience. Additionally, it is difficult to measure the extent to which such issues are a consequence of early abuse. The experience of abuse may trigger the onset of psychological difficulties and likewise, the abuse may exacerbate or perpetuate psychological difficulties (Dugal, Bigras, Godbout & Bélanger, 2016). Existing research in this field has heavily relied on the use of cross-sectional designs, making it difficult to establish any such causal effects. In addition to this,

³⁶ The present study will include neglect, witnessing domestic violence (DV), physical abuse, emotional abuse and sexual abuse within its definition of abuse (Briere, 2002).

there is a general lack of research on the specific experiences and pathways to psychological difficulties within the care leaver population (Dixon, 2009).

It is likely that multiple factors are associated with, and potentially mediate the relationship between childhood abuse and emotional difficulties for care leavers. These may include the experience of abuse prior to entering care, loss of attachment figures, and the experience of being taken into care, which is often perceived as traumatic in itself (Cleaver, 2000; Fernandez, 2009). The present study thus aims to analyse this relationship considering a range of transdiagnostic processes (attachment style, Early Maladaptive Schemas, and coping strategies).

2.1.3 Attachment Theory

Webster and Hackett (2007) have argued that attachment theory can provide a useful framework for conceptualising some of the difficulties relating to care leavers. Attachment theory highlights that a child's early experience with a primary caregiver creates the framework for future interpersonal relationships and emotional regulation abilities (Bowlby, 1973; 1984). Children are suggested to have an innate drive to maintain proximity to their caregiver when they feel threatened (Bowlby, 1973). This drive is thought to protect the child from harm and to allow them to be soothed in times of stress (Mikulincer, Shaver & Pereg, 2003). In order for the child to achieve attachment 'security', it is proposed that a caregiver must be readily available, attentive and sensitive to the child's distress (Hazan & Diamond, 2000). According to Bowlby (1973), children construct mental representations known as 'Internal Working Models' (IWMs), which allow their thoughts and feelings to be organised at times of attachment stress. When parenting has been sensitive, positive expectations about others' availability and positive views of the self are formed (Mikulincer et al., 2003).

For children who have experienced abuse a different attachment pathway may be developed. The patterns of IWMs found in children are thought to cluster across 'attachment styles' which include; 'secure', 'insecure-avoidant', 'insecure- ambivalent' (Ainsworth, Blehar, Waters & Wall, 1978) and 'disorganised' (Main & Soloman, 1990). If caregivers have been violent, insensitive or unavailable, IWMs will be constructed accordingly and defensive processes will be developed within the child to help manage the painful thoughts and feelings related to the experience (Bowlby, 1982; 1984). These defences typically fall within three categories (George & Solomon, 1996; George & West, 2001), as illustrated in Table 3.

Table 3

Attachment Defences

| Attachment Defence | Purpose of defence | Child Behaviour | Associated Attachment Style |
|--------------------------------|---|---|------------------------------------|
| Deactivation | Threatening stimulus is blocked or deactivated to protect from rejection. | Shutting down Inhibiting signs of distress | Avoidant attachment |
| Cognitive Disconnection | Distraction or disconnection is used to cope with distress. | Simultaneously busying self with other activity and monitoring their caregiver. | Ambivalent attachment |
| Segregated Systems | Used to keep traumatic attachment memories separate from painful emotion. | Becoming overwhelmed in times of attachment stress and displaying confused or dysregulated behaviour. | Disorganised attachment |

The literature on attachment stability over time has highlighted some inconsistencies; from moderate stability (Fraley, 2002), to no stability across larger time intervals (Pinquart et al., 2013). Despite this, the role of attachment is frequently examined in studies on victims of childhood abuse³⁷.

2.1.3.1 Childhood Abuse and Attachment

The empirical and theoretical link between childhood abuse and insecurity in adult attachment organizations has been well established (Aspelmeier, Elliot & Smith, 2007; Banyard, Hamby & Grych, 2017; Davis et al., 2014; Winham et al., 2015). Unfortunately, the literature has tended to focus on childhood sexual abuse, leaving physical and emotional abuse relatively under examined (Norman, Byambaa, De, Scott & Vos, 2012). Despite this, physical and emotional abuse has been associated with significant and enduring negative outcomes (Kaplan, Pelcovitz & Labruna, 1999). The present study aims to further explore this relationship, examining the role of childhood

³⁷ For more detailed discussion on the assessment of adult attachment please see Chapter one (section 1.1.3.2 Assessment of Attachment in Adulthood).

abuse on attachment across sexual, physical and emotional abuse, witnessing DV and neglect domains.

2.1.3.2 Childhood Abuse, Attachment and Psychological Difficulties

Similarly to childhood abuse, attachment insecurity has been associated with a number psychological and behavioural difficulties including; maladaptive coping (Perlman et al., 2016; Shorey & Snyder, 2006), emotional dysregulation (Milkulincer & Shaver, 2007) and personality disorder (Herman, Perry & van der Kolk, 1989). Although a causal direction is unclear, correlations between childhood abuse experience, attachment insecurity, and psychological difficulties in adulthood have been observed (Aspelmeier et al., 2007; Limke, Showers & Zeigler, 2010; Perlman et al., 2016; Winham et al., 2015).

It is probable that the development of an insecure attachment reduces one's psychological resources, thus increasing the vulnerability to pathology (Rosenstein & Horowitz, 1996). As such one's attachment style can be thought to account for differences in functioning across the range of psychological and interpersonal difficulties experienced by adults following childhood abuse (Bifulco, Moran, Ball & Lillie, 2002).

2.1.3.3 The Relationship between Childhood Abuse and Attachment in Care Leavers

For care leavers, the risk of attachment insecurity and associated psychological distress is significant (McAuley & Davis, 2009). They are likely to have experienced abuse prior to entering care, from primary caregivers who did not meet their attachment needs (Bazalgette et al., 2015). Further to this, once in the care system they may experience significant adjustments (e.g. multiple placement moves) which are likely to further intensify and perpetuate such difficulties (Hannon et al., 2010). These factors in turn can serve to reinforce the attachment difficulties previously encountered and perpetuate the psychological difficulties that follow (Hannon et al., 2010; Ward, Brown, Westlake & Munro, 2010). The presence of psychological difficulties may contribute to the development of social difficulties in care leavers (Hannon et al., 2010). Indeed, several studies have recognised poor mental health as both a cause and result of unstable care journeys. Despite this, a limited amount of research has investigated the complexities that underpin these relationships within the care leaver population (Dixon, 2009; Murphy, 2011). Figure 2 offers a visual representation of the proposed interaction between childhood abuse, attachment insecurity and psychological difficulties.

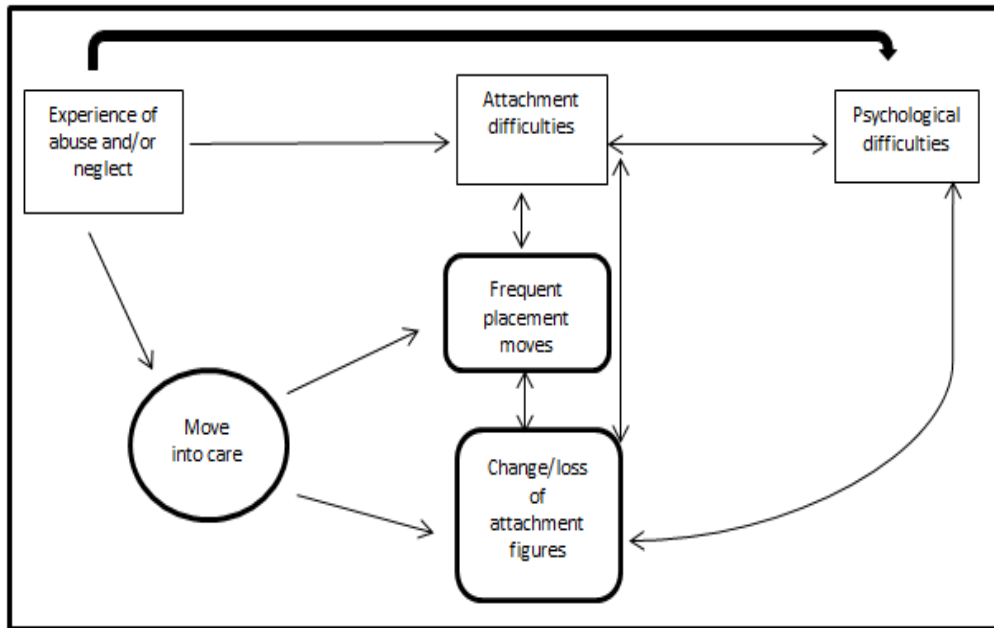


Figure 2. The Relationship between Childhood Abuse, Attachment and Psychological Difficulties in Care Leavers

2.1.4 Schema Theory

In an attempt to build on attachment theory, some researchers have suggested that IWMs be used as a conceptual framework which can be applied across other theories (Bretherton & Munholland, 2008). Main (2000) proposed that attachment research could benefit from links with other fields such as cognitive therapy, highlighting that early attachment experiences can shape future learning about the self. As such, several authors have drawn comparisons between IWMs and cognitive schemas (Bosmans, Braet & Van Vlierberghe, 2010; Bretherton, 1990; Platts, Tyson & Mason, 2002; Platts, Mason & Tyson, 2005; Thompson, 2008) and it has been said that schema representation including the formation of beliefs about the self, others and the world, help explain the relevance of attachment style in practice (Platts et al., 2002).

2.1.4.1 Early Maladaptive Schemas

Jeffrey Young built on early ideas from Cognitive Theory (Beck, 1979) creating a new branch of cognitive therapy, named Schema Therapy³⁸ (Young, 1994). The model helps individuals to make sense of their patterns of early developed thoughts and behaviour through the identification of Early Maladaptive Schemas (EMS). Similarly to IWMs, Young defined EMS as a broad pervasive pattern relating to oneself and one's relationships, developed during childhood

³⁸ Schema therapy was developed to treat patients with chronic interpersonal problems and those who were not adequately treated by traditional cognitive-behavioural therapy (Young, 1994).

and rehearsed throughout the lifetime (Young, Klosco & Weishaar, 2003). They are made up of memories, bodily sensations, emotions and cognitions, which once activated, evoke intense emotional responses. Early Maladaptive Schemas are thought to drive behaviour and coping in a pattern which then further perpetuate the schema (Young, 1994). Young et al. (2003) proposed five categories of schema domains from 18 EMS, as illustrated in Table 4.

Table 4.

Schema Domains

| Schema Domain | Home environment | Associated Beliefs and Behaviours |
|--|--|--|
| Disconnection & Rejection | Detached, unpredictable and abusive | Learn to expect that their need for safety, nurturance and empathy will not be met |
| Impaired Autonomy and Performance | Controlling or enmeshed | learned not to trust their ability and so may struggle to function independently |
| Impaired Limits | Over indulgent or permissive | Deficiencies relating to internal limits, respect, and responsibility |
| Other Directedness | Conditional love and acceptance | Excessive motivation to meet the needs of others, at the expense of their own needs. |
| Over Vigilance & Inhibition | Dominant family structures or where performance standards and self-control took priority | Excessive focus of controlling, suppressing or ignoring their emotions in order to avoid making mistakes or to meet rigid internalised rules |

Both EMS and IWMs are cognitively and emotionally laden organisations that develop from, and serve as templates for the processing of interpersonal experiences across the lifespan (Young et al., 2003; Young & Lindemann, 1992). Moreover, it has been suggested that EMS are cognitive expressions functioning as a specific component of IWMs (Platts et al., 2002). A limited number of studies have observed the relationship between IWMs and EMS. However, Platts et al.

(2005) showed that attachment style could be predicted by EMS with 77% being reliably categorised. They noted differences in reliability across attachment classifications, with highest rates of accuracy within secure and fearful groups (15–16% misclassification) compared to the preoccupied group (55% misclassification).

Higher levels of EMS have been found in participants categorised with a fearful or preoccupied attachment style, compared to those with a secure attachment style in both a clinical sample (Platts et al., 2005) and within the care leaver population (Murphy, 2011). However, both of these studies found low EMS scores in participants categorised with a dismissive attachment style, similar to those with a secure attachment style (Murphy, 2011; Platts et al., 2005). This is likely to relate to a wider issue in assessing individuals with a dismissive attachment style who have a tendency to under-report psychological symptoms (Dozier & Lee, 1995; Simard, Moss & Pascuzzo, 2011).

2.1.4.2 Childhood Abuse and Early Maladaptive Schemas

Although the model is still in its relative infancy, emerging evidence suggests that categories of EMS are correlated with childhood experiences of abuse (Lumley & Harkness, 2007; Wright, Crawford & Del Castillo, 2009). A prominence of the 'disconnection and rejection' schema domain has been observed in such populations (Cecero, Nelson & Gillie, 2004; Gay et al., 2013; Kaya Tezel, Tutarel & Boysan, 2015; McGinn, Cukor & Sanderson, 2005) and within the care leaver population specifically (Murphy, 2011). This schema domain has been associated with the highest levels of psychological distress (Furnivall, McKenna, McFarlane & Grant, 2012; Murphy, 2011). Schemas have also been shown to mediate the relationship between childhood abuse and psychological difficulties (Dutra, Callahan, Forman, Mendelsohn & Herman, 2008; Hartt & Waller, 2002; Harding, Burns & Jackson, 2012; McGinn et al., 2005; Waller et al., 2001).

Both EMS and IWMs are likely to mediate individual differences in perception, beliefs and emotional regulation, in turn shaping behaviour (Fraley, Garner & Shaver, 2000; Mikulincer et al., 2003; Young, 2003). Individuals categorised with an anxious or avoidant attachment style have been shown to engage in coping strategies that unintentionally lead to relationship difficulties and further anxiety and depression (Bayley, Slade & Lashen, 2009; Mikulincer, Florian & Weller, 1993). As such coping style has been established as another important variable in the relationship between abuse and negative outcomes (Skinner, Edge, Altman & Sherwood, 2003).

2.1.5 Coping³⁹

Coping has been defined as a process of managing stress through threat appraisal and the regulation of one's thoughts, emotions and behaviour (Carver, Scheier & Weintraub, 1989; Compas, Connor-Smith, Saltzman, Thomsen & Wadsworth, 2001; Lazarus & Folkman, 1984; Skinner & Wellborn, 1994). In order to cope with a situation, individuals are thought to select from a broad range of cognitive or behavioural strategies which operate at multiple levels and across different time points, depending on environmental circumstances at play (Skinner et al., 2003).

2.1.5.1 Assessment of Coping

Researchers have tended to cluster coping responses using theory based categories (Folkman & Moskowitz, 2004). For example, problem-focused coping (strategies employed to actively address the problem) and emotion-focused coping (strategies that reduce negative emotions; Folkman & Lazarus, 1980). However, there have been criticisms of measures that use such categorical divisions as it has been suggested that they do not fully encapsulate the broad range of coping approaches used by individuals (Carver et al., 1989). In response to these criticisms, Carver et al. (1989) developed an assessment of coping based on multidimensional formations of coping processes (i.e. the COPE), and inclusion of a more diverse range of coping strategies.

2.1.5.2 Childhood Abuse and Coping

The relationship between childhood abuse and maladaptive coping is likely related to a range of complex processes. It has been suggested that chronic adversity leads to an exhaustion of effective coping, giving rise to maladaptive coping (Baumeister, Faber & Wallace, 1999; Hobfoll, Freedy, Green & Solomon, 1996). One's early experiences can also shape the patterns of behaviour that are learnt to manage stress. For example a child that has experienced abuse may have felt powerless and learnt to cope through the use of avoidance and disengagement because other strategies were futile (Lepore & Evans, 1996). Indeed, such patterns of coping have been found in victims of childhood abuse (Dishoom- Brown et al., 2017; Filipas & Ullman, 2006; Logan, Walker, Jordan & Leukefeld, 2006; Walsh, Fortier & DiLillo, 2010). Attachment orientation has also been found to drive coping processes (Mikulincer et al., 2003) and attachment insecurity has been associated with both a lack of adaptive coping strategies (Kobak & Sceery, 1988; Mikulincer et al., 2003) and increased maladaptive coping (Marganska, Gallagher & Miranda, 2013; Mikulincer et al., 2003; Wei, Volge, Ku & Zakalik, 2005).

³⁹ Please refer to Chapter One for a further discussion on the construct of coping (section titled '1.1.4 Coping as a Construct') and the assessment of coping (section titled '1.1.4.1 Assessment of Coping').

Maladaptive coping has been shown to put one at increased risk of further psychological difficulties (Skinner et al., 2003). It has been highlighted that avoidant and disengagement strategies in particular, cause increased psychological distress since they interfere with the emotional and cognitive processing of traumatic experiences (Foa & Rothbaum, 1998; Resick & Schnicke, 1992). However, the relationship between childhood abuse and coping processes has not been investigated within the care leaver population.

2.1.6 The Present Study

Understanding the factors that lead to poor outcomes for care leavers is essential to ensure appropriate interventions. Care leavers face significant adversity with regards to employment and education, physical health and psychological wellbeing (Fletcher, Strand & Thomas, 2015; Minnis, et al., 2006). These outcomes are likely related to early experiences of abuse and neglect which are then exacerbated by the hardship faced once in the care system (e.g. the loss of relationships and placement instability; Fernandez, 2008).

Attachment theory provides a useful framework for understanding the link between childhood abuse, later psychological distress and maladaptive behaviour. There is evidence that childhood abuse is associated with insecurity in adult attachment organisations and that attachment insecurity is associated with a range of psychological difficulties including maladaptive coping (McAuley & Davis, 2009). Similarly, childhood abuse has been linked to the presence of EMS, which presents an additional risk for psychological distress and poor coping (Furnivall et al., 2012). High levels of the 'disconnection and rejection' EMS, which has been associated with the highest levels of psychological distress of all EMS categories, have been found within the care leaver population (Murphy, 2011). Associations have also been made between attachment insecurity and EMS (Murphy, 2011; Platts et al., 2005).

Given that childhood abuse has been linked to insecure attachment and EMS, and that insecure attachment and EMS have been linked to both each other and to maladaptive coping, it is plausible that a significant pathway between these domains will arise within a care leaver group. However, these factors have not been analysed together within a single study or within the care leaver population.

Current research into EMS is in its infancy, but it has been suggested that schema representations can help to explain the clinical relevance of attachment style (Platts et al., 2002). It is therefore important to identify whether, within the care-leaver population, distinct EMS profiles will emerge. This could have significant clinical implications for working therapeutically with this

population. Similarly, if distinct attachment profiles linked to childhood abuse exist, it is likely that these will contribute to the maintenance of the difficulties experienced by this population and thus further attention through the provision of targeted interventions will be necessary. Figure 3. offers a visual representation of the proposed theoretical model of the relationships between childhood abuse, attachment insecurity (anxious and avoidant), EMS and maladaptive coping.

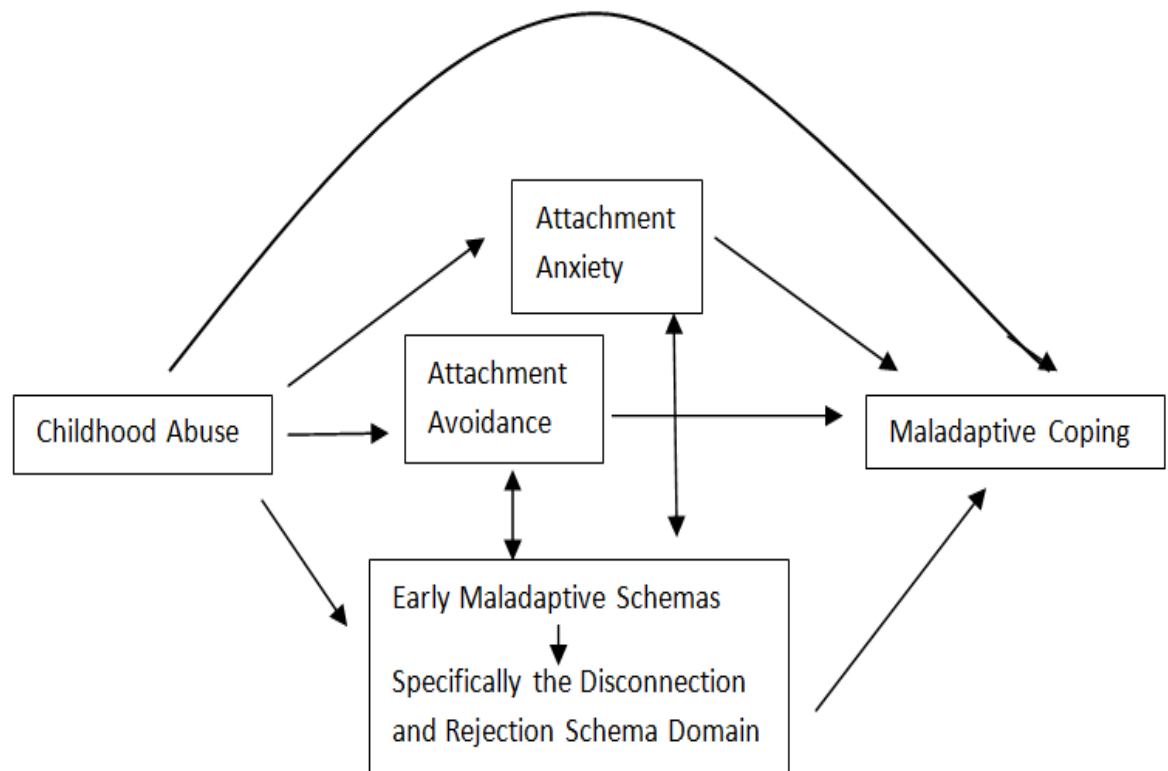


Figure 3. Proposed Theoretical Model of the Relationship between Childhood Abuse, Attachment, EMS and Maladaptive Coping

Therefore, this study intends to build on current research in order to increase psychological understanding of the pathways associated with childhood abuse, attachment and EMS and coping by testing the following hypotheses:

- i. Childhood abuse will positively predict attachment insecurity (both anxious attachment and avoidant attachment) within a care leaver population.
- ii. Childhood abuse will positively predict EMS severity (total EMS and the disconnection and rejection schema domain) within a care leaver population.

- iii. Maladaptive coping will be predicted by childhood abuse, attachment insecurity (both attachment anxiety and attachment avoidance), and EMS (total EMS and the disconnection and rejection EMS schema domain) within a care leaver population
- iv. Both avoidant and anxious attachment and EMS (total EMS and the disconnection and rejection EMS schema domain) will mediate the relationship between childhood abuse and maladaptive coping in a care leaver population.

2.2 Method

2.2.1 Design

The study employed a within subjects, cross-sectional design using correlational, regression and mediation analysis.

2.2.2 Participants

Participants were adults, 18 years and above who have had an experience of living in care during childhood.

2.2.2.1 Sampling strategy

An opportunity sample was used to recruit participants through third sector and charity organisations in London and Hampshire, a Social Care Pathways Team in Hampshire, social media and a web based recruitment platform. Recruitment took place over ten months from June 2018-April 2019.

2.2.2.2 Inclusion & Exclusion Criteria

Adults with an experience of living in care as a child⁴⁰ were recruited. Participants were excluded if they were younger than 18 years or were unable to understand written English⁴¹.

2.2.2.3 Anticipated Sample Size

A priori analyses⁴² was conducted for a multiple linear regression, based on the most involved analysis in the study (hypothesis iii). This indicated a sample size of 92 would be suitable for detection of a medium effect size⁴³ ($f^2=.15$), and a total of five predictors. This was considered acceptable based on previous research using similar methods (Murphy, 2011; Shapiro & Levendosky, 1999).

2.2.2.4 Demographic Characteristics

No participants were excluded from the study. Of the 74 participants that enquired about the study, 19 did not return emails or complete the survey, and 2 stated they were no longer interested in taking part. Due to the survey being advertised online to individuals across the UK,

⁴⁰ Participants could have an experience of either foster care or care homes. There was no minimum time requirement for time spent in care due to anticipated difficulties in accessing this population.

⁴¹ Due to lack of translation resources available for the research.

⁴² Power was calculated using G*Power version 3 (Faul, Erdfelder, Lang & Buchner, 2007).

⁴³ Where power is .8 and α is .05 (Cohen, 1992).

the researcher was unable to estimate the total sampling pool, and demographic information could not be obtained for non-responders. Tables 5 and 6 illustrate key participant characteristics.

Table 5

Demographic Characteristics of Sample

| Variable | Sub-category | N (Frequency) |
|--|--------------------|---------------|
| Age (years) Mean= 33.55 ⁴⁴ SD=12.83 Range= 18-67 | 18-25 | 19 |
| | 26-35 | 14 |
| | 36-45 | 10 |
| | 46-55 | 7 |
| | 56+ | 3 |
| Gender | Male | 22 (41.5%) |
| | Female | 31 (58.5%) |
| Ethnicity | White British | 28 (52.8) |
| | White Irish | 3 (5.7%) |
| | White Other | 5 (9.4%) |
| | Black African | 5 (9.4%) |
| | Black Caribbean | 2 (3.8%) |
| | Other Black | 3 (5.7%) |
| | Indian | 1 (1.9%) |
| | Pakistani | 1 (1.9%) |
| | Chinese | 1 (1.9%) |
| | Other Asian | 2 (3.8%) |
| | Did Not State | 1 (1.9%) |
| Marital Status | Single | 28 (52.8%) |
| | Married | 16 (30.2%) |
| | Civil Partnership | 1 (1.9%) |
| | Divorced | 4 (7.5%) |
| | Separated | 1 (1.9%) |
| | Other | 3 (5.7%) |
| Employment | Employed Full Time | 28 (52.5%) |
| | Employed Part Time | 7 (13.2%) |
| | Student | 9 (17%) |
| | Unemployed | 6 (11.3%) |
| | Other | 3 (5.7) |

⁴⁴ Age was collected as continuous data, however sub-categories have been used within the table to aide readability.

| | | |
|---------------|-------------------------|------------|
| Accommodation | Private Renting | 18 (34%) |
| | Social Housing | 8 (15.1%) |
| | Home Owner | 20 (37.7%) |
| | Supported Accommodation | 3 (5.7%) |
| | Other | 4 (7.5%) |

Table 6

Care Experience Characteristics

| Variable | Sub-category | N (Frequency) |
|----------------------|--------------|---------------|
| Age Entered Care | 0-11 months | 5 (9.5%) |
| | 1-3 years | 11 (20.8%) |
| | 4-5 years | 2 (3.8%) |
| | 6-8 years | 7 (13.2%) |
| | 9-11 years | 12 (22.6%) |
| | 12-14 years | 8 (15.1%) |
| | 15-18 years | 8 (15.1%) |
| Time Spent in Care | 0-11 months | 3 (5.7%) |
| | 1-2 years | 11 (20.8) |
| | 3-4 years | 6 (11.3%) |
| | 5-6 years | 10 (18.9%) |
| | 7-8 years | 8 (15.1%) |
| | 9-10 years | 1 (1.9%) |
| | 11-12 years | 2 (3.8%) |
| | 13-14 years | 5 (9.4%) |
| | 15-16 years | 5 (9.4%) |
| | 17-18 years | 2 (3.8%) |
| Number of Placements | 1 | 11 (20.8%) |
| | 2-3 | 17 (32.1%) |
| | 4-5 | 10 (18.9%) |
| | 6-8 | 6 (11.3%) |
| | 9-11 | 2 (3.8%) |
| | 11+ | 7 (13.2%) |

2.2.3 Measures

Participants completed a demographic questionnaire (Appendix E) responding to questions about age, gender, ethnicity, number of care placements and time spent in care. Six self-report questionnaires were then utilised to assess the following components:

2.2.3.1 Childhood Abuse

The Child Abuse and Trauma Scale (CATS; Sanders & Becker-Lausen, 1995) was used to assess childhood abuse. The CATS is a 38 item self-report questionnaire used to identify the frequency and severity of different types of childhood abuse. The CATS measures subjective retrospective reports of negative home environment/neglect (16 items), childhood emotional abuse (seven items), punishment/physical abuse (seven items) and sexual abuse (six items) during childhood. Participants were requested to score how frequently they experienced a range of traumatic events on a four point rating scale from never (0) to always (4) with higher scores reflecting higher abuse severity. The measure provides an overall score for childhood abuse although individual subscales can also be treated dimensionally (Sanders & Becker-Lausen, 1995).

The measure has been found to have satisfactory psychometric properties with test-retest reliability ($r = .71$ to $.91$), concurrent validity ($r = .24$ to $.41$) and internal consistency ($\alpha = .57$ to $.88$ ⁴⁵; Kent & Waller, 1998; Sanders & Becker-Lausen, 1995). The measure covers a range of traumatic childhood experiences and has been frequently used in research investigating psychological difficulties related to childhood abuse (Goldsmith, Freyd & DePrince, 2009; van Hanswijck de Jonge, Waller, Fiennes, Rashid & Lacey, 2003). It is thought to be a particularly sensitive measure in populations at greater risk of childhood trauma (Sanders & Becker-Lausen, 1995). As a result this was deemed the most appropriate measure for this population.

2.2.3.2 Attachment Style

Attachment style was assessed using the Experience in Close Relationships-Relationship Structures Questionnaire (ECR-RS; Fraley, Niedenthal, Marks, Brumbaugh & Vicary, 2006). The ECR-RS is a 36 item self-report questionnaire derived from the Experience in Close Relationships-Revised (ECR-R; Fraley, Waller & Brennan, 2000). It measures attachment patterns across general and specific relationships (mother, father, romantic partner and best friend) using nine items to assess anxious and avoidant dimensions of attachment. Participants respond to items on a seven-point Likert scale from one (strongly disagree) to seven (strongly agree). A relationship specific

⁴⁵ A value of 0.70 or greater for Cronbach's alpha indicates good reliability, however minimally acceptable alpha reliabilities should meet or exceed .50 acceptable (Cortina, 1993; Kline, 1999).

attachment score (across both avoidance and anxiety dimensions) can be gathered by calculating the average of the items (1-6 for avoidance and 7-10 for anxiety). Global avoidance and anxiety attachment can be established by calculating the average of the relevant scores for the four individual targets.

Internal consistency for both the anxiety and the avoidance scales has been shown to be greater than or equal to .89 (Fraley et al., 2006; Rocha, Peixoto, Nakano, Motta & Wiethaeuper, 2017). The measure has been found to correlate with a variety of relational domains as well as with the ECR-R (Fraley et al., 2011). The measure is widely accepted amongst attachment research (Creasey & Hesson-McInnis, 2001; Creasey, Kershaw & Boston, 1999; Donbaek & Elkit, 2003).

2.2.3.3 Early Maladaptive Schemas

Early Maladaptive Schemas were assessed using the Young Schema Questionnaire – Short Form 3 (YSQ-SF3; Young, 2005). The measure is a 90 item self-report questionnaire measuring 18 different EMS across the five schema domains. The items are rated on a six-point rating scale (1 = entirely untrue of me, 6 = describes me perfectly). Items on the questionnaire are clustered according to specific schema domains, and the scores for each domain are calculated from the total number of items within each domain, with higher scores representing prominence of EMS.

The YSQ, in both its long and short forms, has proven to hold good psychometric properties. Many studies have confirmed the construct validity of the EMS scales (Lee, Taylor & Dunn, 1999; Rijkeboer & van den Bergh, 2006; Waller, Meyer & Ohanian, 2001). For the YSQ-SF3 Cronbach's alpha level was .96 in a clinical sample (Waller, Meyer & Ohanian, 2001). The measure has been used in similar studies relating to EMS and psychological symptoms (Ak, Lapsekili, Hacıomeroglu, Sutçigil & Turkcapar, 2012) and with a sample of care leavers (Murphy, 2011).

2.2.3.4 Coping

Coping was assessed through the COPE Inventory (Carver et al., 1989). This 60 item self-report questionnaire comprises of 14 discrete coping subscales⁴⁶ which are based on theoretical arguments about adaptive and maladaptive properties of coping. Items are rated on a four-point scale (one- "don't usually do this" to four- "do this a lot") and for each scale items are summed to give a total with higher scores representing more use of the coping style. The measure does not provide an overall coping index or adaptive or maladaptive composites, however the author

⁴⁶ Subscales include: positive reinterpretation and growth, use of instrumental social support, use of emotional social support, active coping, religious coping, planning; acceptance, humour, focus on and venting of emotions, denial, behavioural disengagement, restraint, substance use, suppression of competing activities and mental disengagement.

suggests that combined scores can be determined through factor analyses of the scaled scores (Carver, 1989). Maladaptive and adaptive coping (Meyer, 2001; Perlman, 2016) and active and avoidant (Shapiro & Levendosky, 1999; Votta & Manion, 2004) categories have been derived from the scales for the COPE and the brief COPE⁴⁷.

The COPE has been found to have good internal reliability, with all scales exceeding a Cronbach's alpha level of .6 and above when grouped as active, avoidant, cognitive and humour (Shapiro & Levendosky, 1999). In the Brief COPE (Carver, 1997) Cronbach's alpha values of greater than .7 were found when scores were grouped into adaptive and maladaptive (Perlman et al., 2016). The measure, in both its full and brief forms has been widely utilised to assess coping responses in clinical and non-clinical populations (Meyer, 2001; Schnider, Elhai & Gray, 2007) and to examine the role of coping following childhood abuse (Dishon- Brown et al., 2017; Perlman et al., 2016; Shapiro & Levendsky, 1999).

2.2.4 Recruitment and Procedure

Recruitment took place via organisations and online. Services were contacted directly to outline the purpose of the study and obtain consent to recruit via the organisation. Services were then encouraged to signpost interested participants to contact the researcher by email. Posters were also disseminated across organisations (see Appendix I) with the researcher's contact details attached. Participants could choose whether they preferred to complete the questionnaires via the online survey platform or on paper. Consenting participants were either given a paper questionnaire pack or emailed with further information (see Appendix J) and provided with a link to the online survey. For participants selecting the online survey, a correspondence address was requested⁴⁸ for the researcher to mail the YSQ-SF3 (Young, 2006).

In addition to this, the researcher posted a study advert on social media platforms⁴⁹. Here, participants were requested to express their interest by emailing the researcher. Participants were then emailed further details about the study, given the link to the online survey, and mailed the final questionnaire. Participants were offered a £5 Amazon voucher upon completion of the questionnaires.

⁴⁷ An abbreviated version of the COPE which comprises of the same subscales with two rather than four items per subscale (Carver, 1997).

⁴⁸ This was because the author of the YSQ-SF3, (Young, 2005) did not provide permission to utilise the questionnaires online. A stamped addressed envelope was provided for the return of questionnaires.

⁴⁹ Adverts were posted on Facebook, Instagram and Twitter), and on an online research recruitment platform.

All data that was collected in the study was coded and anonymised to safeguard confidentiality. The data was securely stored in accordance with General Data Protection Regulation (GDPR, 2018) and the Data Protection Act (2018).

2.2.5 Ethical Considerations

Given that some of the questionnaires were sensitive in nature, strategies were employed to minimise the risk of distress. A detailed information sheet (Appendix K), consent form (Appendix L), and debrief form (Appendix N) were utilised, and a 'mood repair' task (adapted from Pennebaker, 2004; Appendix M) was offered at the end of the questionnaires. Both the information and debrief sheet had information about how to access advice and support. Finally, participants were given the details of a qualified Clinical Psychologist, and were encouraged to contact them in the event of feeling distressed.

The study was approved by the University of Southampton, School of Psychology Ethics Committee (Appendix O).

2.2.6 Statistical Analyses Strategy

2.2.6.1 Proposed Analysis Plan

For hypothesis i and ii the analysis strategy included the use of linear regressions to examine the predictive nature of childhood abuse on attachment anxiety, attachment avoidance and EMS (both total EMS and the disconnection and rejection schema domain). The analysis strategy for hypothesis iii also included the use of linear regression to investigate the predictive nature of childhood abuse, attachment anxiety, attachment avoidance, EMS (both total EMS and the disconnection and rejection schema domain) on maladaptive coping.

For hypothesis iv the analysis strategy included the use of mediation analysis using PROCESS (Hayes, 2013) with bootstrapping to examine for indirect effects of attachment anxiety, attachment avoidance, EMS total score and the disconnection and rejection schema domain on the relationship between childhood abuse and maladaptive coping. Bootstrapping⁵⁰ is recommended in place of the formerly favoured Baron and Kenny (1986) 'causal steps' and the Sobel (1986) test approach, as it does not require normal distribution and has shown greater power when testing for indirect effects with multiple mediation models (Hayes, 2012).

⁵⁰ This method relies on analysing large numbers of repetitive computations from the data set to estimate the shape of the statistics sampling distribution. It calculates bias corrected and accelerated bootstrapping intervals for the whole data from random amounts of indirect effects.

2.2.6.2 Revised Analysis Plan

The initial aim to recruit 92 participants was not met. This would have allowed for detection of a medium effect size where power was .8 and α is .05 (Cohen, 1992). A total sample of 53 was achieved, however only 40 of the total 53 participants (75%) returned completed YSQ-SF3 questionnaires (part two of the study⁵¹) lowering the data for EMS variables. As a result, the analysis plan was adapted to appropriately manage a data set of $n=53$ and $n=40$. The EMS variables were removed from the main hypotheses (i.e. hypothesis iii & hypothesis iv) to reduce the likelihood of analyses being under-powered. Two additional analyses for the EMS variable were employed⁵²; using linear regression to examine the predictive nature of EMS (total EMS, and the disconnection and rejection schema domain) on maladaptive coping; and using mediation analysis with bootstrapping to examine the indirect effect of EMS on the relationship between childhood abuse and maladaptive coping.

Low statistical power increases the chances of a Type I⁵³ error occurring. However, Bonferroni corrections were not used to adjust p values, as these increase the risk of a Type II error (Button et al., 2013), and reduce the validity of the findings. Furthermore, Jennions and Moller (2003) and Nakagawa (2004) recommend the routine reporting of observed effect sizes over the use of Bonferroni corrections. As such, effect sizes are reported in correlation and mediation analyses.

Prior to analysis, data were checked by the researcher. Minor amounts of missing data were identified (<1%) from part one⁵⁴ of the study, which were addressed by using mean subscale substitution, to maintain sample size (Tabachnick & Fidel, 2001). The Statistical Packages for Social Sciences (SPSS) version 25 was used to complete all data analyses and inferential statistics.

⁵¹ Part two refers to the YSQ-SF3 which was posted to participants because the author did not allow permission for the measure to be used online (see section 2.3.6. Recruitment and Procedure).

⁵² No significant differences in demographics were observed between groups with completed and incomplete YSQ-SF3.

⁵³ A type I error is falsely inferring the existence of an effect that does not exist.

⁵⁴ Part one refers to the online survey which included CATS, ECRS-RS, and the COPE questionnaires.

2.3 Results

2.3.1 Preliminary Analyses

The variable distributions were assessed using descriptive statistics and tests of normality⁵⁵, in line with Field (2013). Normal distributions were shown across the majority of scales⁵⁶. The ECR-RS avoidance subscale indicated non-normal distribution ($D(53) = .136, p = .016$). However, Z-scores for skewness ($z = .83$) and Kurtosis ($z = .53$) were not significant ($p > .05$)⁵⁷ and histograms appeared relatively normally distributed. Some outliers were identified using boxplots⁵⁸, however these were not removed as they were not consistently outlying across the measures and were considered severe cases within this population. Bootstrapping was used for mediation analyses and considered for regression analyses where appropriate.

2.3.2 Descriptive Statistics

Internal consistency was calculated for total scores and subscales using Cronbach's alpha (Table 7). Means and Standard Deviations were also calculated (Table 8).

⁵⁵ Z-Scores were used to assess Skew and Kurtosis, as well as tests of normality (Kolmogorov-Smirnov and Shapiro-Wilk)

⁵⁶ Total CAT score; total YSQ; ECR-RS- global anxiety subscale; the COPE maladaptive and adaptive coping subscales.

⁵⁷ Field (2013) advises that caution be applied when using Kolmogorov-Smirnov tests as slight differences can lead to significant results. As such they should be used in conjunction with z scores and histograms.

⁵⁸ Total CAT (n=1); CAT scales; neglect (n=3), and emotional abuse (n=3). ECR-RS subscale; overall avoidance (n=5). YSQ subscales; Impaired Limits (n=1) and Other Directedness (n=1). COPE subscales: Positive Reinterpretation (n=3), and Religious Coping (n=1).

Table 7

Cronbach's Alpha for Variables and Subscales

| Variable | Subscale | α^{59} | M | SD | Range |
|----------|---|---------------|-------------|-------------|------------|
| CATS* | Sexual Abuse | .71 | 1.41 | 1.96 | 0-4 |
| | Emotional Abuse | .84 | 2.36 | 2.00 | 0-4 |
| | Physical Abuse | .80 | 2.50 | 1.81 | 0-4 |
| | Negative Home Environment/Neglect | .84 | 2.36 | 2.00 | 0-4 |
| | Total CATS | .94 | 2.32 | 1.95 | 0-4 |
| ECR-RS | Global Anxiety | .87 | 3.8 | 5.19 | 1-7 |
| | Global Avoidance | .88 | 4.32 | 4.18 | 1-7 |
| YSQ-SF3* | Disconnection and rejection | .95 | 3.46 | 3.00 | 1-6 |
| | Impaired Autonomy/Performance | .89 | 2.51 | 2.54 | 1-6 |
| | Impaired Limits | .79 | 2.87 | 2.40 | 1-6 |
| | Other directedness | .81 | 3.41 | 2.54 | 1-6 |
| | Over-vigilance and Inhibition | .92 | 3.60 | 2.71 | 1-6 |
| | Total EMS | .97 | 3.20 | 2.70 | 1-6 |
| COPE | Positive reinterpretation and growth | .69 | 2.84 | 1.00 | 1-4 |
| | Use of instrumental social support | .82 | 2.40 | .95 | 1-4 |
| | Use of emotional social support | .86 | 2.42 | 1.00 | 1-4 |
| | Active coping | .77 | 2.55 | .92 | 1-4 |
| | Acceptance | .73 | 2.70 | 1.07 | 1-4 |
| | Planning | .85 | 2.67 | 1.00 | 1-4 |
| | Religious coping | .87 | 1.51 | .75 | 1-4 |
| | Humour | .90 | 2.32 | 1.22 | 1-4 |
| | Overall Adaptive Coping⁶⁰ | .88 | 2.43 | .99 | 1-4 |

⁵⁹ Cronbach's Alpha over 0.70 indicate good reliability or greater, however minimally acceptable alpha reliabilities should meet or exceed .50 (Cortina, 1993; Kline, 1999).

⁶⁰ Internal consistency was explored for adaptive and maladaptive coping composite scores, on the basis of previous research (see section 2.3.5.4). Given that the alpha for overall adaptive (.88), and overall maladaptive (.82) was good, the composite scores were accepted to reduce the amount of data for the COPE.

| | | | | |
|-------------------------------------|-------------------|-------------|------------|------------|
| Behavioural disengagement | .78 | 2.02 | .81 | 1-4 |
| Mental disengagement | .53 ⁶¹ | 2.70 | 1.04 | 1-4 |
| Focus on and venting of emotions | .86 | 2.52 | 1.07 | 1-4 |
| Restraint | .66 | 2.25 | .73 | 1-4 |
| Substance use | .93 | 1.87 | .96 | 1-4 |
| Suppression of competing activities | .64 | 2.37 | .84 | 1-4 |
| Denial | .80 | 1.93 | 1.21 | 1-4 |
| Overall Maladaptive Coping | .82 | 2.24 | .95 | 1-4 |

Note. CATS- Child abuse and Trauma Scale, ECR-RS- Experience in Close Relationship-Relationship Structures, YSQ-SF3- Young Schema Questionnaires short form 3. *CATS and YSQ-SF3 subscales are reported above but were not used in the main analyses.

⁶¹ A low alpha level is noted within this subscale. Removing one item increased the consistency to $\alpha = .62$. However, as this is not a significant improvement, and changing the subscales would reduce the comparability between studies, the subscale was kept the same.

Table 8

*Mean Scores of Variables and Subscales*⁶²

| Variable | Subscale | Mean (SD) N=53 | Range |
|-----------------------|--|-------------------|------------|
| CATS* | Sexual Abuse | 1.41 (1.03) | 1-4 |
| | Emotional Abuse | 2.35 (1.02) | 1-4 |
| | Physical Abuse | 2.49 (.91) | 1-4 |
| | Negative Home Environment/Neglect | 2.53 (.90) | 1-4 |
| | Total CATS | 2.32 (.79) | 1-4 |
| ECR-RS | Global Anxiety | 3.82 (1.5) | 1-7 |
| | Global Avoidance | 4.32 (1.01) | 1-7 |
| YSQ-SF3 ⁶³ | Disconnection and rejection | 3.46 (1.15) | 1-6 |
| | Impaired Autonomy/Performance | 2.51 (.90) | 1-6 |
| | Impaired Limits | 2.87 (.92) | 1-6 |
| | Other directedness | 3.42 (.84) | 1-6 |
| | Over-vigilance and Inhibition | 3.59 (.84) | 1-6 |
| | Total EMS | 3.20 (.83) | 1-6 |
| COPE | Positive reinterpretation and growth | 2.84 (.72) | 1-4 |
| | Use of instrumental social support | 2.41 (.79) | 1-4 |
| | Use of emotional social support | 2.42 (.84) | 1-4 |
| | Active coping | 2.55 (.73) | 1-4 |
| | Acceptance | 2.70 (.78) | 1-4 |
| | Planning | 2.67 (.83) | 1-4 |
| | Religious coping | 1.50 (0.75) | 1-4 |
| | Humour | 2.32 (.97) | 1-4 |
| | Overall Adaptive Coping ⁶⁴ | 2.34 (.45) | 1-4 |
| | Behavioural disengagement | 2.02 (.70) | 1-4 |
| | Mental disengagement | 2.70 (.65) | 1-4 |
| | Focus on and venting of emotions | 2.52 (.87) | 1-4 |
| | Restraint | 2.25 (.60) | 1-4 |
| | Substance use | 1.87 (.89) | 1-4 |

⁶² Within the CATS, ECR-RS and YSQ-SF3 higher mean scores relate to more severity. In the COPE a higher mean relates to more use of the coping strategy.

⁶³ Note. For YSQ-SF3 n=40.

⁶⁴ Internal consistency was explored for adaptive and maladaptive coping composite scores, on the basis of previous research (see section 2.3.5.4). Given that alpha for overall adaptive (.88), and overall maladaptive (.82) was high, the composite scores were accepted to reduce the amount of data for the COPE.

| | | |
|-------------------------------------|-------------------|------------|
| Suppression of competing activities | 2.37 (.63) | 1-4 |
| Denial | 1.94 (.87) | 1-4 |
| Overall Maladaptive Coping | 2.24 (.40) | 1-4 |

Note. CATS- Child abuse and Trauma Scale, ECR-RS- Experience in Close Relationship-Relationship Structures, YSQ-SF3- Young Schema Questionnaires short form 3. *CATS and YSQ-SF3 subscales are reported above but were not used in the main analyses.

2.3.2.1 Childhood Abuse

A high total CAT score was found ($M = 2.32$, $SD = .79$) which is more than double that found in various non-clinical samples ($M = .39$ to $.91$, $SD = .06$ to $.66$; Kent & Waller, 1998; Sanders & Becker-Lausen, 1995) and higher than a sample of bulimic women ($M = 1.19$, $SD = .82$; Hartt & Waller, 2002). However, levels were similar to those found within a sample of adults with multiple personality disorder (DSM-III-R: APA, 1987; $M = 2.7$, $SD = .84$; Sanders & Becker-Lausen, 1995).

The highest mean severity scores came from the neglect and negative home environment, although physical and emotional abuse was not too dissimilar. Experience of sexual abuse was reported by 77.4%⁶⁵ of participants. This is significantly higher than rates observed within the general population (3-32%; Briere & Elliot, 2003) and higher than clinical populations (40-71%; Zandarini & Frankenburg, 1997).

2.3.2.2 Adult Attachment Style

Consistent with previous research (Murphy, 2011), high levels of both avoidant ($M = 4.32$, $SD = 1.01$) and anxious ($M = 3.82$, $SD = 1.50$) attachments were found within this population. Both attachment anxiety and avoidance scores are significantly above those found within non-clinical populations ($M = 3.18$, $SD = .96$ and $M = 2.53$, $SD = 1.19$ respectively; Fraley et al., 2011) and clinical populations ($M = 3.63$, $SD = 1.80$ and $M = 3.19$, $SD = 1.43$ respectively; Selwood, 2013). Means were closer to a previous sample of care leavers ($M = 3.51$, $SD = 1.12$ and $M = 3.88$, $SD = 1.24$ respectively; Murphy, 2011).

The scatter-plot presented in Figure 4 shows population scores for global attachment anxiety and avoidance, indicating an association between both domains of attachment. Correlations (as detailed in Table 6) revealed that attachment anxiety was significantly correlated with attachment avoidance within this population ($r = 0.69$, $p < 0.01$).

⁶⁵ Scores greater than zero (on a scale of 0-4) represented the presence of sexual abuse.

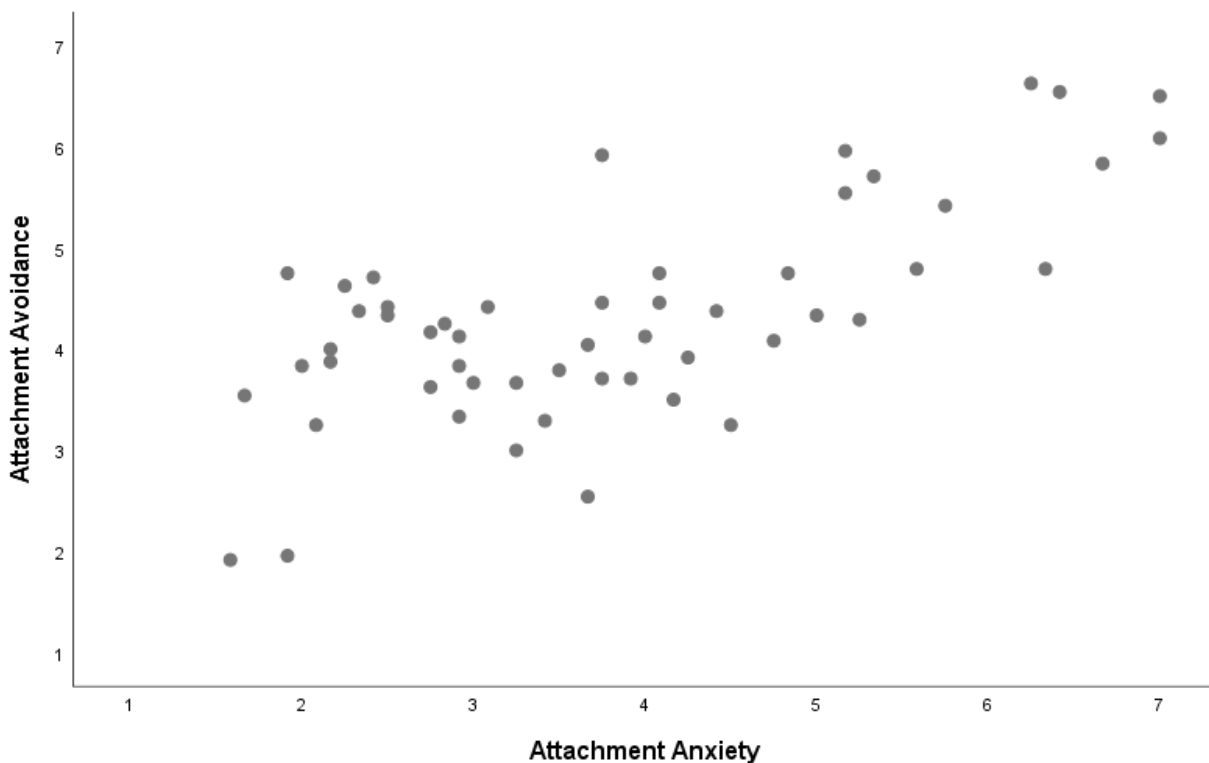


Figure 4. Scatterplot of the Distribution of Anxious and Avoidant Attachment Scores

2.3.2.3 Early Maladaptive Schemas

Highest mean scores came from the over-vigilance and inhibition EMS ($M = 3.59$, $SD = .84$) and the disconnection and rejection EMS ($M = 3.46$, $SD = 1.15$). Mean scores for total EMS score ($M = 3.20$, $SD = 2.70$) were higher than that found in a sample categorised with secure ($M = 2.52$, $SD = .86$) and dismissing attachment styles ($M = 2.42$, $SD = .71$), but lower than groups categorised with preoccupied ($M = 3.55$, $SD = .83$) and fearful attachment styles ($M = 3.78$, $SD = .84$; Mason, Platts & Tyson, 2005⁶⁶). The disconnection and rejection domain was significantly higher than that found within non-clinical samples ($M = 2.14$, $SD = .84$; Mairet, Boag & Warburton, 2014⁶⁷; $M = 2.31$, $SD = .87$; Unal, 2014⁶⁸). As was the over-vigilance and inhibition domain ($M = 2.76$, $SD = .68$; Bamuscu, 2014⁶⁹). No norms from clinical samples were available for comparison.

⁶⁶ Note: Mason et al. (2005) used an earlier version of the YSQ-SF3, the YSQ-SF (Young, 1998).

⁶⁷ Note: Only the disconnection and rejection schema was measured independently within Mason, Platts & Tyson (2005).

⁶⁸ Note: Only the disconnection and rejection schema was measured independently within Unal (2014).

⁶⁹ Note: they study utilised a Turkish adaptation Turkish adaptation of YSQ-SF3 was conducted by Soygüt, Karaosmanoğlu, and Çakır (2009) of the YSQ-SF3. However the same domains were grouped.

2.3.2.4 Coping

The COPE indicates that mental disengagement and positive reinterpretation and growth were the most commonly used coping styles. Religious coping and coping through alcohol and substances were the least common. Composite scores indicated a slightly higher use of adaptive ($M = 2.43$, $SD = .06$) compared to maladaptive coping ($M = 2.24$, $SD = .06$). Composite means are higher than that found in non-clinical samples (adaptive; $M = 1.65$; and maladaptive; $M = .95$ ⁷⁰; Moore, Biegel & McMahon, 2011) and are similar to those found in a sample of psychiatric inpatients (adaptive: $M = 2.37$, $SD = .70$ and maladaptive: $M = 2.02$, $SD = .65$; Meyer, 2001⁷¹).

2.3.3 Correlations between Childhood Abuse, Attachment, Early Maladaptive Schemas and Maladaptive Coping

Table 9 illustrates the Pearson correlation coefficients for variables of the main hypotheses, specific relationships are highlighted below:

⁷⁰ Standard Deviations were not reported within the study.

⁷¹ Please note, Meyer (2001) used the brief COPE, and included only four subscales (behavioural disengagement, denial, venting, and self-blame) for the maladaptive composite score due to a lack of internal consistency for substance use and self-distraction components within their sample.

Table 9

Pearson correlation coefficients for Childhood Abuse, Attachment, Early Maladaptive Schemas and Maladaptive Coping (N = 53⁷²)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---------------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| 1. CSA | - | | | | | | | | | | | | |
| 2. Neglect | .57** | - | | | | | | | | | | | |
| 3. CPA | .50** | .41** | - | | | | | | | | | | |
| 4. CEA | .74** | .79** | .71** | - | | | | | | | | | |
| 5. Total CAT | .78** | .89** | .71** | .95** | - | | | | | | | | |
| 6. Avoidance | .35** | .64** | .26 | .54** | .59** | - | | | | | | | |
| 7. Anxiety | .29** | .43** | .08 | .32** | .37** | .69** | - | | | | | | |
| 8. DR | .26 | .30 | .30 | .36* | .38* | .32* | .26 | - | | | | | |
| 9. IA | .04 | .17 | -.01 | .11 | .13 | .18 | .31 | .77** | - | | | | |
| 10. IL | .01 | .14 | .29 | .10 | .16 | -.00 | .14 | .35* | .44** | - | | | |
| 11. OD | .14 | .10 | .15 | .10 | .15 | .17 | .39* | .57** | .68** | .49** | - | | |
| 12. OV | .32 | .24 | .29 | .36* | .35* | .32* | .36* | .78** | .65** | .33* | .73** | - | |
| 13. TOTAL EMS | .21 | .25 | .25 | .28 | .31 | .28 | .35* | .91** | .88** | .54** | .81** | .88** | - |
| 14. Mal-Cope | .21 | .22 | .19 | .17 | .24 | .07 | .34* | .52** | .42** | .16 | .54** | .45** | .53** |

Note. CAT – Child Abuse and Trauma Scale, CSA – child sexual abuse, CEA – child emotional abuse, CPA – child physical abuse, Avoidance- global attachment avoidance, anxiety- global attachment anxiety, DR- disconnection and rejection, IA- impaired autonomy, IL- impaired limits, OD- other directedness, OV- over-vigilance and inhibition, Mal-Cope- Maladaptive Coping.. * $p < .05$ (2-tailed), ** $p < .01$ level (2-tailed).

2.3.3.1 Childhood Abuse and Attachment Insecurity (hypothesis i)

The results demonstrated that experiencing greater levels of childhood abuse positively correlated with both global attachment avoidance ($r = .59, p = .00$) and anxiety ($r = .37, p = .01$). All

⁷² *Note.* For schema correlations N=40.

abuse sub-categories showed positive correlations to attachment anxiety and avoidance except childhood physical abuse (avoidance; $r = .26, p = 0.06$, anxiety; $r = .08, p = .56$).

2.3.3.2 Childhood Abuse and Early Maladaptive Schemas (hypothesis ii)

No significant correlations were observed between total childhood abuse and overall schema score ($r = .31, p = .06$). However, there was a significant positive correlation between total abuse scores and both disconnection and rejection ($r = .38, p = .02$) and over-vigilance and inhibition ($r = .35, p = .03$). Childhood emotional abuse also significantly positively correlated with the disconnection and rejection ($r = .36, p = .03$) and the over-vigilance and inhibition ($r = .35, p = .03$) schema domains.

2.3.3.3 Childhood Abuse and Maladaptive Coping (hypothesis iii)

No significant correlations were observed between total childhood abuse score and maladaptive coping ($r = .24, p = .09$), although the trend was in the expected direction compared to that of childhood abuse and adaptive coping ($r = -.17, p = .23$). No significant correlations were found between childhood abuse sub-categories and maladaptive coping.

2.3.3.4 Attachment Insecurity and Maladaptive Coping (hypothesis iii)

The results demonstrate that global attachment anxiety was significantly positively correlated to maladaptive coping ($r = .34, p = .01$). However, there was no significant correlation between global attachment avoidance and maladaptive coping ($r = .07, p = .60$).

2.3.3.5 Early Maladaptive Schemas and Maladaptive Coping (hypothesis iii)

There was a significant positive correlation between total EMS and maladaptive coping ($r = .53, p = .00$). Furthermore, all schema domains except for impaired limits ($r = .16, p = .34$) were found to positively correlate to maladaptive coping.

Correlations do not allow for the predictive power of variables to be observed. Thus, regression analysis was used which allows for exploration of the predictive value of one or more variables upon an outcome (Field, 2005).

2.3.4 Regressions for Childhood Abuse, Attachment, Early Maladaptive Schemas and Maladaptive Coping (hypotheses i, ii, iii)

Four simple linear regressions with bootstrapping were used to examine the predictive nature of childhood abuse on attachment anxiety, attachment avoidance, EMS (total EMS and the

disconnection and rejection schema domain) and maladaptive coping (hypotheses i & ii), as shown in Table 10.

Childhood abuse predicted both global attachment avoidance and global attachment anxiety, explaining 35% and 14% of the variance respectively (avoidance; $F(1, 51) = 27.30, p = .01$ and anxiety; $F(1, 51) = 8.23, p = .01$). Childhood abuse also significantly predicted total EMS (10% of the variance; $F(1, 51) = 3.92, p = .05$), the disconnection and rejection schema domain (14% of the variance; $F(1, 38) = 6.10, p = .02$).

Table 10

Linear Regression Models

| | | Correlation | Variation | Predictor | | |
|-----|-----------|-------------|----------------|---------------------|-----|---------|
| PV | DV | R^2 | $F(1,51)^{73}$ | b | SE | β |
| CAT | Anxiety | .14 | 8.23** | .22 (.08, .35) | .08 | .37 |
| CAT | Avoidance | .35 | 27.30** | .49 (.30, .65) | .10 | .59 |
| CAT | EMS | .10 | 3.92* | .73 (-.33, 1.49) | .47 | .31 |
| CAT | DR | .14 | 6.10* | .34 (.01, .61) | .15 | .38 |
| EMS | Mal-Cope | .29 | 14.75** | .08 (.04, .12) | .02 | .53 |
| DR | Mal-Cope | .27 | 13.91** | .52 (.09, .30) | .05 | .20 |

Note. 95% bias corrected and accelerated confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1,000 bootstrap samples. * $p < .05$, ** $p < .01$. PV-predictor variable, DV-dependent variable, CAT- Child Abuse and Trauma Scale total, Anxiety- global attachment anxiety, avoidance- global attachment avoidance, EMS- total EMS, DR- Disconnection and rejection schema domain, Mal-Cope- total maladaptive coping.

⁷³ For regressions with EMS scores $F(1,38)$ due to difference in sample size ($N=40$).

A multiple linear regression was calculated to predict maladaptive coping based on childhood abuse, attachment anxiety and attachment avoidance (hypothesis iii), as shown in Table 11. A significant regression equation was found ($F(3, 49) = 5.10, p = .004$), with an R^2 of .24. We can conclude that childhood abuse is a significant predictor of maladaptive coping, over and above attachment anxiety and attachment avoidance ($\beta_1 = .33, t(3, 49) = 2.15, p = 0.037, sr^2 = 0.07$). With one standard unit increase in childhood abuse, the predicted value of maladaptive coping increases by .33 units when attachment anxiety and attachment avoidance are held constant. We can also conclude attachment anxiety is a significant predictor of maladaptive coping over and above childhood abuse and attachment avoidance ($\beta_2 = .58, t(3, 49) = 3.35, p = 0.002, sr^2 = 0.17$). With one standard unit increase in attachment anxiety, the predicted value of maladaptive coping increases by .58 units when childhood abuse and attachment avoidance are held constant. Finally, attachment avoidance is a significant predictor of maladaptive coping, over and above childhood abuse and attachment anxiety, however this relationship was in a negative direction ($\beta_3 = -.53, t(3, 49) = -2.64, p = 0.011, sr^2 = -0.12$). With one standard unit increase in attachment anxiety, the predicted value of maladaptive coping decreases by -.53 units when childhood abuse and attachment anxiety are held constant.

Table 11

Linear Multiple Regression with Predictors of Maladaptive Coping

| | <i>b</i> | SE B | β | <i>p</i> |
|----------------------|-------------------------|------|---------|----------|
| Constant | 60.27 (48.73, 71.77) | 5.89 | | .000 |
| Childhood Abuse | .12 (0.04, 0.20) | .04 | .33 | .037 |
| Attachment Anxiety | .36 (0.17, 0.53) | .09 | .58 | .002 |
| Attachment Avoidance | -.23 (-0.39, -0.06) | .08 | -.53 | .011 |

Note. $R^2 = .24$. 95% bias corrected and accelerated confidence intervals reported in parentheses. Confidence intervals and standard errors based on 1,000 bootstrap samples.

Separate linear regression were calculated to predict maladaptive coping based on EMS total and the disconnection and rejection schema domain (hypothesis iii), as shown in table 10. Maladaptive coping was predicted by both total EMS (explaining 29% of the variance; $F(1, 38) = 14.75, p = .002$) and the disconnection and rejection schema domain (explaining 27% of the variance; $F(1, 38) = 13.91, p = .001$).

2.3.5 The Mediating Effect of Attachment and Early Maladaptive Schemas

As illustrated in Figure 5, three mediation models were proposed to test the hypotheses that attachment style and EMS mediate the relationship between childhood abuse and maladaptive coping (hypothesis iii).

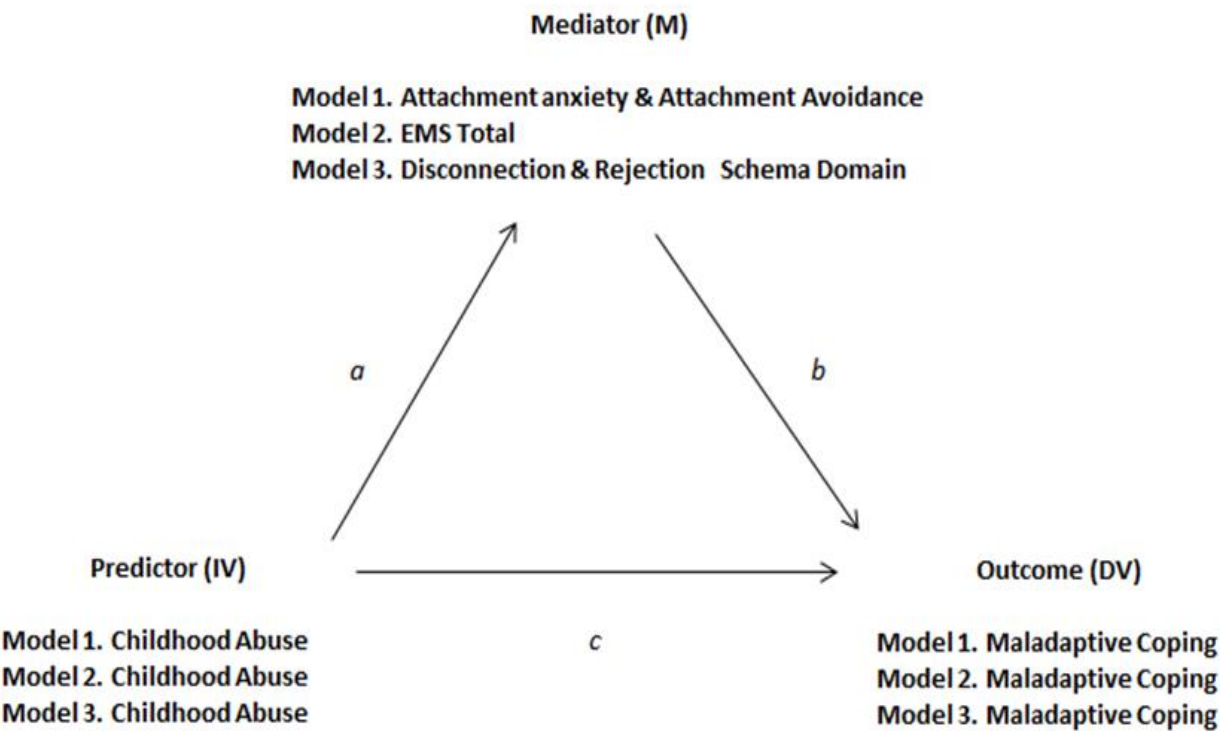


Figure 5. Proposed Mediation Models

For Model 1. both anxious and avoidance attachment dimensions were analysed together as parallel mediators to uniquely assess each association while controlling for the effects of the other dimension of attachment. As highlighted in table 12, the indirect effect for maladaptive coping through the attachment classifications examined was not significant ($b = -.03, 95\% \text{ CI } [-.11,$

.05]). However, a significant indirect path emerged for maladaptive coping through both attachment anxiety ($b = .08$, 95% CI [.02, .16.]). Interestingly there was a significant indirect path for maladaptive coping through attachment avoidance, however this was in a negative direction ($b = -.11$, 95% CI [-.21, -.03.]). Figure 6. offers a visual representation of the mediation model with regression coefficients.

Table 12

Effects of Parallel Mediation Model with Attachment Anxiety and Attachment Avoidance as Mediators.

| IV | DV | Indirect effects of attachment anxiety | Indirect effects of attachment avoidance | Total effects | Direct effects in mediation model | Total indirect effects | 95% CI Bias corrected | |
|------|----------|--|--|---------------|-----------------------------------|------------------------|-----------------------|-------|
| | | b [95% CI] | b [95% CI] | Coeff (SE) | Coeff (SE) | Coeff (SE) | Lower | Upper |
| CATS | Mal-Cope | .22 [.05, .40.]* | -.31 [-.58, -.08.]* | .09 (.05) | .12 (.05)* | -.09 (.04) | -.34 | .13 |

Note. IV- independent variable, DV- dependent variable, CATS- Childhood abuse, Mal-cope- maladaptive coping. Bootstrapping based on 1,000 resamples. Completely standardised indirect effects, based on standardised b . * $p < .05$, ** $p < .01$.

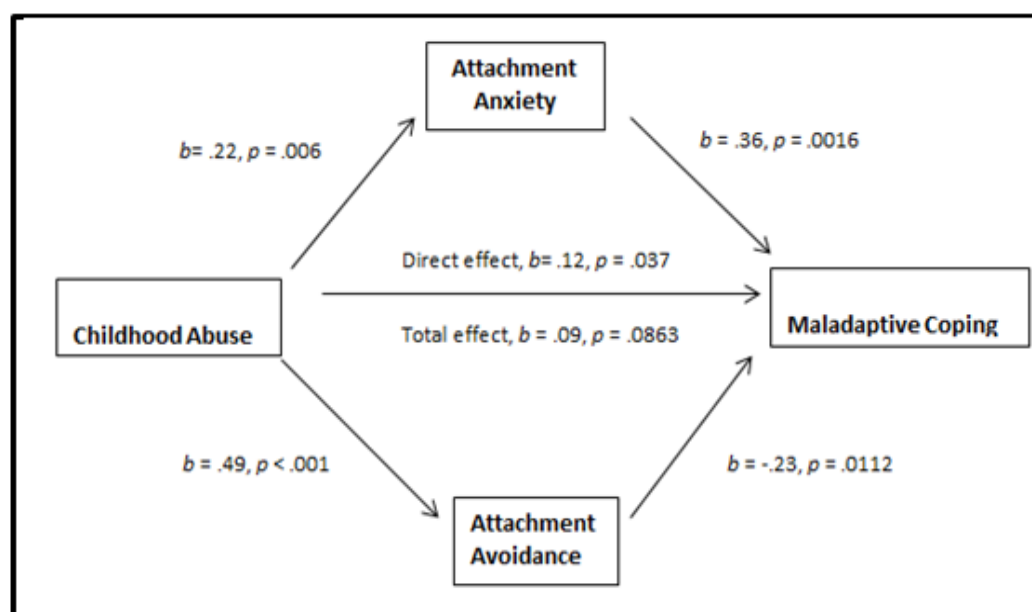


Figure 6. Mediation model of childhood abuse as a predictor of maladaptive coping, mediated by attachment anxiety and attachment avoidance.

Table 13 illustrates the variables of the two proposed mediation models testing childhood abuse as a predictor for maladaptive coping with EMS total (model 2) and the disconnection and rejection schema domain (model 3) as mediators. No significant indirect effects were found for the relationship between childhood abuse and maladaptive coping when the mediator was total EMS ($b = .16$, 95% BCa CI $[-.04, .40]$). However, significant indirect effects were found for the disconnection and rejection schema domain ($b = .20$, 95% BCa CI $[.01, .40]$), indicating that the disconnection and rejection schema domain mediated the relationship between childhood abuse and maladaptive coping (Figure 7).

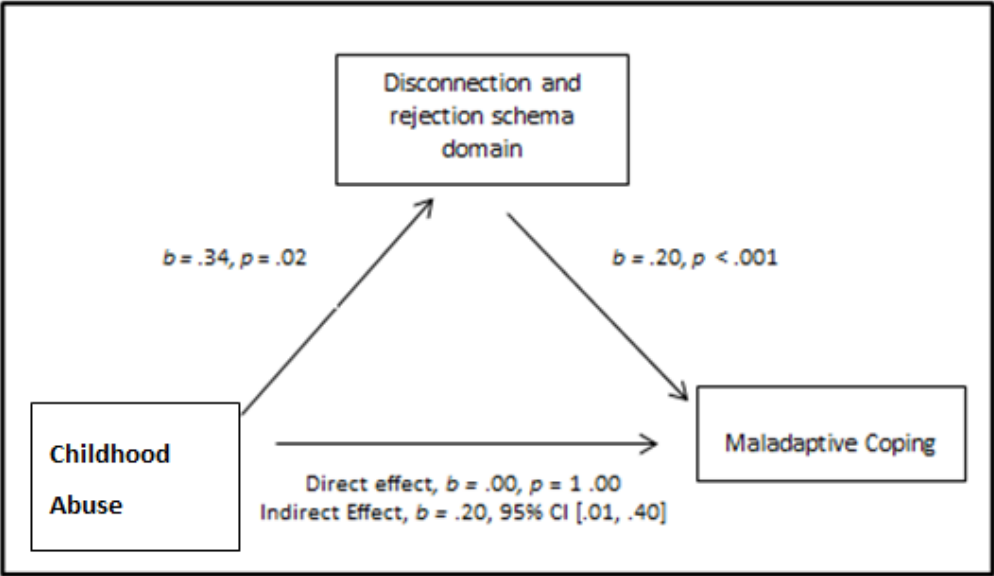


Figure 7. Mediation model of childhood abuse as a predictor of maladaptive coping, mediated by the disconnection and rejection schema domain. Indirect effect confidence intervals is BCa bootstrapped CI based on 1000 samples.

Table 13

Bootstrapping Results for Mediation Models 2 and 3

Note. Bootstrapping based on 1,000 resamples. * $p < .05$, ** $p < .01$.

| Mediation Model | Independent Variable (IV) | Dependent Variable (DV) | Mediator (M) | Effect of IV on M | Effect of M on DV | Total effects | Direct effects | Indirect effects | 95% CI Bias corrected ⁷⁴ | |
|-----------------|---------------------------|-------------------------|---------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------------------------|-------|
| | | | | <i>Coeff (SE)</i> | <i>Coeff (SE)</i> | <i>Coeff (SE)</i> | <i>Coeff (SE)</i> | <i>Coeff (SE)</i> | Lower | Upper |
| 3. | CATS | Maladaptive Coping | EMS (total) | .73 (.73)* | .08 (.02)** | .07 (.06) | .01 (.05) | .16 (.11) | -.04 | .40 |
| 4. | CATS | Maladaptive Coping | Disconnection and rejection EMS | .34 (.14)* | .20 (.06)** | .07 (.06) | .00 (.05) | .20 (.10) | .01 | .40 |

⁷⁴ Completely standardised indirect effects, based on standardised b .

2.4 Discussion

2.4.1 Summary of Study

The present study aimed to investigate the role of adult attachment style and EMS in the relationship between childhood abuse and maladaptive coping within a care leaver population. Specifically, the aim was to examine the predictive nature of childhood abuse on attachment (avoidance and anxiety), EMS and maladaptive coping. The study also aimed to investigate the relationship between childhood abuse, attachment and maladaptive coping. The final aim was to investigate the relationship between childhood abuse, EMS and maladaptive coping.

2.4.2 Summary of Findings

The present study identified high levels of childhood abuse, attachment insecurity (both anxious and avoidant), EMS and maladaptive coping within the sample of care leavers compared to various clinical and non-clinical samples.

The results from the regression analyses indicate that higher levels of childhood abuse significantly predicted both attachment avoidance and anxiety. Similarly, childhood abuse severity significantly predicted EMS overall severity, and the disconnection and rejection schema domain. Results from a multiple regression found that maladaptive coping was predicted by childhood abuse and attachment anxiety. Interestingly maladaptive coping was negatively predicted by attachment avoidance. Maladaptive coping was also predicted by both EMS overall severity, and by the disconnection and rejection schema domain.

Analyses of three proposed mediation models showed no significant indirect effects for maladaptive coping through the attachment classifications with both attachment anxiety and attachment avoidance were parallel mediators. However, a significant indirect effect on maladaptive coping through attachment anxiety was found. Contrary to expected, there was a significant indirect effect on maladaptive coping through attachment avoidance in a negative direction. Overall EMS severity was not a significant mediator in the relationship between childhood abuse and maladaptive coping. However, the disconnection and rejection schema domain was identified as a significant mediator within this relationship.

2.4.3 Interpretation of Findings

The role of attachment

Higher rates of attachment insecurity were found within the care leaver population compared to various previous findings using clinical and non-clinical samples. Although attachment has been relatively under-examined within care leaver populations, the findings are consistent to those found in a previous study on care leavers (Murphy, 2011). The findings are also consistent with research identifying high levels of attachment insecurity (both anxious and avoidant) following childhood abuse (Dishon-Brown et al., 2017; Herbert et al., 2018; Ma & Li, 2014; Shapiro & Levendosky, 1999), and relationships between attachment insecurity and maladaptive coping in these groups (Hyland et al., 2018; Perlman et al., 2015; Shapiro & Levendosky, 1999). The findings of this study add to the current empirical literature which indicates that experience of abuse has consequences for the development of IWMs, leading to internalised negative beliefs (Godbout et al., 2014). This process is thought to form the development of insecure attachment patterns which can in turn, shape maladaptive coping (Bayley et al., 2009; Mikulincer et al., 1993), highlighting a particular vulnerability within the care leaver population.

Both attachment anxiety and attachment avoidance had an indirect effect on the relationship between childhood abuse and maladaptive coping. However, for attachment avoidance this was not in the expected direction, suggesting that attachment avoidance decreased maladaptive coping. One interpretation for this result relates to the differences in strategies employed by anxious versus avoidant individuals. Indeed attachment anxiety is associated with higher levels of emotional expression whereas attachment avoidance is associated with inhibition of thoughts or emotions (Mikulincer & Shaver, 2007). Further to this, there is evidence to suggest that participants with a dismissive attachment style tend to under-report psychological symptoms when compared to reports given by people who know them well (Dozier & Lee, 1995). This is consistent with empirical evidence showing that attachment avoidance symptomology is less pronounced than attachment anxiety (Declercq & Willemssen, 2006; Lopez et al., 1998; Platts et al., 2005; Selwood, 2013). Likewise, the ECR-RS may not have been a sensitive measure for attachment avoidance within this context (see limitations).

The significant indirect effect on maladaptive coping through attachment anxiety is consistent with previous literature among individuals with childhood abuse experiences (Perlman et al., 2016; Riggs, 2010). Attachment anxiety is associated with negative self-evaluations, preoccupation with attachment related goals and impulsivity which is borne out of invalidating early attachment

experiences (Mikulincer, 1998). As a result, they are more likely to use more self-blame and have higher levels of guilt and shame following the experience of abuse (Murthi et al., 2006). This pathway to attachment insecurity is thought to lead to the development of maladaptive emotion regulation strategies which can act as a risk factor for later psychopathology (Carlson, 1998). This can lead to underdeveloped or ineffective coping at times of attachment activation (Mikulincer & Shaver, 2007).

The role of EMS

The results of this study are consistent with previous research on similar samples that have identified high levels of EMS and relationships between childhood abuse and EMS severity (Lumley & Harkness, 2007; Wright et al., 2009). Similarly, the prominence of the disconnection and rejection schema domain found within the study is consistent with empirical data from victims of childhood abuse (Cecero et al., 2004; McGinn et al., 2005) and within the care leaver population specifically (Murphy, 2011).

Only the disconnection and rejection schema domain (compared with total EMS) mediated the relationship between childhood abuse and maladaptive coping. This fits previous findings which have isolated the disconnection and rejection schema domain as a unique mediator in the relationship between childhood abuse and psychological difficulties in various clinical populations (Bosmans et al., 2010; Gay et al., 2013; Kaya et al., 2015), and within care leavers (Murphy, 2011). This adds support to Young's (2003) proposition that pathways to schema development are nuanced, based on the type of early adversity experienced. Specifically, the disconnection and rejection schema domain is proposed to develop from detached, unpredictable and abusive home environments wherein one develops beliefs that their need for love, safety, stability and nurturance within relationships are not going to be met (Young et al., 2003). It has been suggested that this domain in particular is associated with childhood abuse and those with high prominence within this domain are the most impaired (Young et al., 2003), highlighting specific vulnerabilities within the care leaver population.

Maladaptive coping

Consistent with the body of research on victims of childhood abuse, high rates of maladaptive coping were found (Dishon- Brown et al., 2017; Hyland et al., 2018; Limke et al., 2010; Ma & Li, 2014; Perlman et al., 2016). Maladaptive coping was significantly predicted by childhood abuse, indicating that one's early experiences of abuse can shape the patterns of behaviour that are learnt to manage stress. This is consistent with previous literature indicating that chronic adversity leads

to an exhaustion of adaptive coping, giving rise to maladaptive coping (Baumeister, Faber & Wallace, 1999; Hobfoll, Freedy, Green & Solomon, 1996). Indeed previous research has found childhood abuse to be associated with a range of maladaptive coping styles including alcohol misuse (Backer- Fulghum, et al., 2012; Lynksey & Fergusson, 1997; Patock-Peckham et al., 2010), minimising coping style (Dishon- Brown et al., 2017), emotion focussed coping (Limke et al., 2010) and avoidant coping (Hyland et al., 2018; Shapiro & Levendosky, 1999). Furthermore, for care leavers there are likely a multitude of complex factors involved in the development of maladaptive coping processes, in addition to the experience of childhood abuse including: loss of significant attachment figures, placement instability, quality of care placement and educational instability, which have been associated with negative outcomes for LAC and care leavers (Cleaver, 2000; Fernandez, 2009).

2.4.4 Clinical Implications

The present study highlights the importance of increasing availability and accessibility of specialist psychological interventions for care leavers (Lamont et al., 2009). Despite LAC and care leavers being recognised as some of the most vulnerable members of society (Care Quality Commission, 2016; McAuley & Davis, 2009), there has been a lack of research investigating the psychological needs of this group (Dixon, 2009). Much of the available literature has focussed on social and educational and mental health outcomes with little investigation of the underlying pathways to distress. The present study highlights the importance of considering psychological factors and at the same time, adds to the current knowledge of the pathways to negative outcomes for this group.

The high prevalence of childhood abuse, attachment insecurity and EMS and their relationship to maladaptive coping processes highlight the importance of addressing each of these factors within this population.

The severity of childhood abuse found within this population emphasises the need for psychological interventions that target abuse-related perceptions and beliefs. Examples of these include Schema-Focused Therapy (Young, 1999) and Cognitive Analytic Therapy (Ryle, 1979) which focus on understanding early adverse experience as a means to change current patterns of maladaptive coping. The development and maintenance of coping strategies form a central role in the majority of evidence-based psychological therapies, which is likely to be particularly helpful for this population.

The findings indicate that the assessment and understanding of individual attachment style is likely to support the formulation and psychological interventions delivered to care leavers. Attachment style has been shown to influence maladaptive coping as well as interpersonal relationships and engagement (Muller et al., 2012). With regards to psychological support, attachment insecurity has been associated with poor engagement (Muller, Gragtmans & Baker, 2008) and poor outcomes (Stalker, Gebotys & Harper, 2005). This is one likely explanation for the erratic and inconsistent engagement of care leavers with mental health services (Lamont et al., 2009). Therapeutic interventions for this population may need to provide additional focus on the role of interpersonal relationships, and the particular strategies associated with each attachment style. Moreover, the differences in relationships observed between attachment anxiety and avoidance and maladaptive coping highlight the need for tailored interventions that take into account the associated coping strategies. Research has indicated that attachment anxiety can be supported through interventions targeting emotional and impulse regulation, whereas attachment avoidance can be supported through building affective expression and interpersonal connectedness (Tasca et al., 2009). Given that individuals with insecure attachments are likely to have difficulties trusting others (Dugal et al., 2016), it is likely focussing on relational factors such as warmth, validation, and consistency will be beneficial. Herein, the therapist may offer an alternative attachment-like figure, acting as a 'safe base' (Bowlby, 1998) with whom the client can build a trusting relationship. Such therapeutic factors have been shown to promote positive views of self (Egeland et al., 1988). Indeed, emerging literature has highlighted that attachment insecurity can be changed over time (Saunders et al., 2011) and changes in attachment scores have been found within therapeutic relationships (Smith et al., 2010) and following interventions (Elklit, 2009). Furthermore, attachment priming may help activate a sense of security by making mental representations more accessible and salient (Gillarth & Karantzas, 2018). Indeed, positive effects of attachment priming on cognitive openness (Mikulincer & Arad, 1999), relationship expectations and self-views (Carnelly & Rowe, 2007) and anxiety and depression (Carnelly, Otway & Rowe, 2016), and emotional regulation (Troyer & Greitemeyer, 2018) have been observed.

Similarly, the findings support the exploration of EMS or the use of schema therapy (Young et al., 2003) as a potential intervention for care leavers. Young et al. (2003) suggested that individual's with prominent EMS within the disconnection and rejection domain will likely struggle to form therapeutic relationships easily due to fears of rejection. As such, care leavers are likely to have difficulties engaging and may not be adequately served in services where strict policies of attendance are enforced (Murphy, 2011). Individuals that score highly for the disconnection and rejection domain have cognitive styles characterized by abandonment, mistrust, defectiveness,

deprivation and social isolation, which are likely to be improved through a sensitive and trusting therapeutic relationship (Young, 2003). In addition to the therapeutic relationship, Schema Therapy promotes adaptive coping through the identification and modification of schema driven thoughts and feelings that are activated in or outside of the session (Young, 2003). There is emerging evidence that Schema Therapy reduces schema severity and associated symptomology within populations with personality disorder (Dickhaut & Arntz, 2014; Nadort et al., 2009), PTSD (Cockram, Drummond & Lee, 2010; Forbes, Creamer & Biddle, 2001) and chronic eating disorders (Simpson, Morrow, van Vreeswijk & Reid, 2010). Although there is no evidence for the use of Schema Therapy for care leavers, it is likely to have something to offer this population.

2.4.5. Strengths and Limitations

The study has a number of strengths. It adds to the evidence base indicating that high rates of childhood abuse, attachment insecurity and EMS exist within care leavers. It also contributes to evidence of a relationship between these factors and maladaptive coping. It is one of few studies examining the psychological needs of care leavers, and was the first to examine the effect of attachment and EMS on coping within this population, highlighting significant clinical implications.

Despite this, there were a number of noteworthy limitations within the study. The cross sectional design means that it is not possible to infer causality, despite the regression and mediational analyses employed (Field, 2013). In addition to this, although the sample was relatively diverse with regards to age, ethnicity and gender, the sample was small and the opportunity sampling method means there is likely to have been sampling bias. The study may have been more appealing to care leavers based on a range of factors including their attachment orientation, level of adaptive coping, socioeconomic status or computer literacy. Furthermore, it could be argued that those who chose not to take part may have higher levels of attachment avoidance, psychological distress or maladaptive coping. This may limit the generalisability of the results. The absence of a matched non-care leaver control group means that the study cannot ascertain that findings are entirely exclusive to the care leaver population. Likewise, the limited sample size constrained analyses so that separate analyses were employed for schema variables, which limited the parsimony of the analytic approach.

The measures used may also limit the interpretation of the results. All participants retrospectively reported on childhood abuse which may impact recall in both validity and severity of reported experiences (Hardt & Rutter, 2004). The reliance on a self-report measure of attachment may have also impacted on results, specifically relating to attachment avoidance as a

non-significant mediator between childhood abuse and maladaptive coping. Given that people with avoidant attachment tend to minimise the impact of historical experiences, self-report questionnaires that rely on conscious processes may not have been appropriately sensitive to pick up effects within this group (Milkulincer & Shaver, 2007).

Similarly, there are well established issues with measuring coping as a construct (Skinner, 2003) and it has been argued that topological categories (e.g. adaptive verses maladaptive) fail to encapsulate the multidimensional ways in which individuals cope (Skinner & Zimmer-Gembeck, 2007). Due to the limited sample number within the study, coping responses were grouped into adaptive and maladaptive similarly to previous studies (Meyer, 2001; Willoughby, 2010). However, this may have reduced the validity of the coping assessment (De Ridder, 1997).

It should also be noted that mediation analyses were not performed on the entire set of schema domain categories measured within the YSQ-SF3. It is possible that with a larger sample, other schema domains may have mediated the relationship between childhood abuse and maladaptive coping. In addition to the disconnection and rejection schema domain, some studies have found the impaired limits schema domain to mediate the relationship between childhood abuse and psychological difficulties (Kaya et al., 2015; Yigit & Erden, 2015). Likewise, a further limitation of the study was the absence of other potentially important variables, in particular mood and emotional regulation. Both mood (Shapiro & Levendosky, 1999; Williams et al., 2019) and emotional regulation (Milkulincer & Shaver, 2007; Selwood, 2013) have been associated with childhood abuse and attachment style. These variables may further help to explain the overall relationship between childhood abuse, attachment, EMS and maladaptive coping.

2.4.6 Areas for Future Research

No previous research has examined the role of attachment and EMS on maladaptive coping in care leavers. The findings would therefore benefit from being replicated using a larger and more representative sample. Further research could include the measurement of distress or mood symptoms related to attachment style and EMS to add further clinical context to the findings. A larger sample may also allow for further investigation of specific categories of abuse and their relationship to attachment and EMS patterns.

Further and more robust assessments of coping may add valuable guidance for appropriate interventions to support care leavers, in addition to the assessment of adaptive coping processes which could be employed and built on within strengths based approaches for this group. Similarly,

future research may benefit from the inclusion of additional assessment tools to corroborate attachment style (e.g. behavioural and physiological measures; Mikulincer & Shaver, 2007).

There is evidence that attachment orientation can change over time (Saunders et al., 2011) and coping strategies are dynamic processes that are time and context dependent (Skinner et al., 2003). Further to this some have argued that patterns of EMS (Young, 2003) and attachment patterns (Ainsworth et al., 1978) become more entrenched the more they are rehearsed. Longitudinal research is thus necessary to build a comprehensive understanding of how these variables develop over the lifespan for care leavers. This may also add insights that contribute to the timeliness of psychological provision.

The use of an experimental design would be useful to establish the efficacy of interventions targeting attachment style, EMS and maladaptive coping in care leavers. This may also add validity to the findings that both attachment and EMS mediate the relationship between childhood abuse and maladaptive coping.

2.4.7 Conclusion

The present study highlights the importance of considering psychological factors within care leaver populations. Results showed significantly high levels of childhood abuse, attachment insecurity, EMS and maladaptive coping within the sample. Analyses found childhood abuse predicted both attachment style (anxious and avoidant) and EMS. Childhood abuse did not directly predict maladaptive coping. However indirect effects were found with both attachment anxiety and disconnection and rejection schema domain as mediators. Further research is needed to replicate and generalise the findings. However, results highlight that these areas are important to target when delivering psychological interventions to this population.

Appendices

Appendix A: Childhood Abuse Measures

Appendices

Appendix A

| Questionnaire | Number | Studies Using Measure |
|--|--------|--|
| Established at Interview | 5 | Lynksey & Fergusson (1997); Karakurt et al. (2013); Ben-Ami & Baker, (2012); Elkit, (2009); Elkit (2015) |
| Established through demographics form | 3 | Herbert et al. (2018); Hyland et al. (2018); Ma & Li, (2014) |
| Childhood Trauma Questionnaire (Bernstein et al., 1994) | 4 | Shapiro & Levendosky (1999); Stover et al. (2013); Perlman et al. (2015); Irwin, (1999) |
| Tolman's Psychological Maltreatment of Women Inventory (Straus, et al., 1996) | 2 | Dishon- Brown et al. (2017); Winham et al. (2015) |
| Percieved parental neglectfulness scale (Gafoor & Kurukkan, 2014); Revised- (Patock- Peckham & Morgan-Lopez, 2010) | 2 | Patock-Peckham and Morgan-Lopez (2010); Backer- Fulghum, et al. (2012) |
| Stressful Life Events Screening Questionnaire (Goodman,et al. 1998) | 1 | Banyard & Canter (2004) |
| the Evaluation of Lifetime Stressors interview (Krinsley, 1996) | 1 | Davis et al. (2004) |
| Revised Conflict Tactics Scale Tjaden & Thoennes, 2000; Tolman, 1989, 1999) | 1 | Dishon- Brown et al. (2017) |
| Life Experiences Questionnaire (Gibb et al., 2001) | 1 | Limke et al. (2010) |
| NatSCEV (Turner et al.,2003) adapted | 1 | Banyard et al. (2017) |

Appendix B: Measures of Attachment

Appendix B

| Measure | Description | Number of studies | Studies |
|---|---|-------------------|---|
| Self-report Measures: Adult Attachment Scale (Modified version; Collins & Read, 1990) | 18 items load onto three subscales (anxiety, closeness and dependence). Questions rated on 5 point Likert Scale | 5 | Shapiro & Levendosky (1999); Dishon- Brown et al. (2017); Winham et al. (2015); Hyland et al. (2018); Elkit, (2009); Elkit (2015) |
| Experiences in Close Relationships Questionnaire (Brennan et al., 1998); Experience in Close Relationship revised (Fraley et al., 2000); Experiences in Close Relationships–Short Form (Wei et al., 2007) | Items load onto two separate factors (attachment anxiety or attachment avoidance). Questions rated on 7 point Likert Scale | 4 | Banyard, et al. (2017); Karakurt et al. (2013); Stover et al. (2013); Perlman et al. (2015) |
| Parental bonding instrument (Parker et al.,1979). | 25 Items load onto two scales termed ‘care’ and ‘overprotection’ or ‘control’. Rated on a 4-point Likert Scale. | 3 | Patock-Peckham& Morgan-Lopez (2010); Lynksey & Fergusson (1997); Backer-Fulghum, et al. (2012) |
| The Preoccupied and Avoidant Coping scales (Yunger et al.,2005) | 30 Items load onto preoccupied, Avoidant, and Secure. | 1 | Ma & Li, (2014) |
| Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) | 28 parents and 25 peer items yield two attachment scores loading onto secure/insecure. Rated on 5-point Likert Scale. | 1 | Banyard & Canter (2004) |
| Adult Attachment Questionnaire (Simpson et al.,1992) | 17 items loaded onto either ambivalence or avoidance. | 1 | Limke et al. (2010) |
| Attachment Behaviors Scale adapted from (Furman & Buhrmester, 2009) | 6 items measuring attachment behaviours load onto secure and insecure domains. Rated on a 4-point Likert Scale | 1 | Banyard, et al. (2017) |
| Relationship Questionnaire (Bartholomew & Horowitz, 1991) | Factors load onto secure, preoccupied, dismissing, and fearful. Four paragraphs describing attachment styles- participants asked to rate affiliation with each on 7 point Likert Scale. | 1 | Ben-Ami & Baker, (2012) |
| Relationship Scales Questionnaire (Griffin & Bartholomew, 1994) | 30 items load onto four factors (secure, fearful, preoccupied, and dismissing). Rated on 5 point Likert Scale | 1 | Irwin, (1999) |
| Structured Interview: The Adult Attachment Interview (George et al., 1985). | Semi-structured interview of approx. 20 questions loading onto four attachment styles (autonomous, dismissing, preoccupied and disorganised) | 1 | Davis et al. (2004) |

Appendix C: Measures of Coping

Appendix C

| | Questionnaire | Number of Studies | Studies |
|---|--|-------------------|---|
| <i>Coping questionnaire</i> | Ways of Coping Questionnaire (Folkman & Lazarus, 1988) | 3 | Irwin, (1999); Banyard & Canter (2004); Limke et al.,(2010) |
| | COPE (Carver et al., 1989) or the Brief COPE (Carver, 1997) | 3 | Shapiro & Levendosky (1999); Dishon- Brown et al. (2017); Perlman et al. (2015) |
| | The Self- Report Coping Scale (Causey & Dubow, 1992) | 1 | Herbert et al. (2018) |
| | The Coping Style Questionnaire (Roger et al., 1993) | 3 | Hyland et al. (2018); Elkit, (2009); Elkit (2015) |
| | The Coping Scale (Hamby et al., 2013) | 1 | Banyard, et al. (2017) |
| | Coping Inventory for Stressful Situations (Endler & Parker, 1990) | 1 | Karakurt et al. (2013) |
| | The Disorganized Coping Scale (Corby, 2007) | 1 | Ma & Li, (2014) |
| <i>Coping subscales within measure</i> | The Difficulties with Emotional Regulation (Gratz & Roemer, 2004). | 1 | Stover et al. (2013) |
| | Self-report Rosenberg Self-Esteem Scale (Rosenberg, 1965) | 1 | Ben-Ami & Baker, (2012) |
| <i>Measurement of other behaviours defined as coping</i> | Measure of eating behaviour | 1 | Davis et al. (2004) |
| | Measure of substance use and alcohol | 7 | Dishon- Brown et al. (2017); Winham et al. (2015); Patock-Peckham and Morgan-Lopez (2010); Lynksey & Fergusson (1997); Stover et al. (2013); Ben-Ami & Baker, (2012); Backer-Fulghum, et al. (2012) |

Appendix D: Quality Assessment Checklist

Appendices

Appendix D⁷⁵

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Questions | | | | | | | | | | | | | | | | | | | | |
| Were the aims/objectives of the study clear? | Red | Green | Green | Red | Green | Green | Green | Green | Green | Green | Red | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Was the study design appropriate for the stated aim(s)? | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Was the sample size justified? | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Red | Green | Green | Red | Red | Red | Red | Red | Red |
| Was the target/reference population clearly defined? | Green | Green | Red | Red | Red | Green | Green | Green | Green | Green | Red | Green | Green | Green | Green | Red | Green | Green | Green | Green |
| Was the sample frame taken from an appropriate population base so that it closely represented the target/reference population under investigation? | Red | Green | Green | Red | Green | Green | Green | Green | Green | Green | Red | Red | Green | Green | Green | Red | Red | Red | Green | Green |
| Was the selection process likely to select subjects/participants that were representative of the target/reference population under investigation? | Red | Green | Green | Red | Red | Red | Green | Green | Red | Red | Red | Red | Green | Green | Red | Red | Red | Red | Green | Red |
| Were measures undertaken to address and categorise non-responders? | Red | Red | Green | Red | Green | Red | Green | Red | Red | Red | Red | Red | Green | Green | Red | Red | Red | Red | Red | Red |
| Were the risk factor and outcome variables measured appropriate to the aims of the study? | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Were the risk factor and outcome variables measured correctly using instruments/ measurements that had been trialled, piloted or published previously? | Red | Green | Green | Red | Green | Green | Green | Green | Green | Green | Red | Green | Red | Red | Green | Red | Green | Red | Green | Red |
| Is it clear what was used to determined statistical significance and/or precision estimates? | Green | Green | Red | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Were the methods (including statistical methods) sufficiently described to enable them to be repeated? | Green | Green | Red | Red | Green | Green | Red | Green | Green | Green | Green | Green | Green | Red | Green | Green | Green | Green | Green | Green |
| Were the basic data adequately described? | Green | Green | Red | Red | Red | Green | Green | Green | Green | Red | Green | Red | Green | Green | Green | Green | Green | Red | Green | Green |
| Does the response rate raise concerns about non-response bias? | Red | Red | Green | Red | Green | Red | Red | Red | Red | Red | Red | Red | Red | Green | Red | Red | Red | Red | Red | Red |
| If appropriate, was information about non-responders described? | Blue | Blue | Blue | Blue | Green | Blue | Red | Red | Red | Blue | Blue | Blue | Blue | Green | Blue | Blue | Blue | Blue | Blue | Blue |
| Were the results internally consistent? | Green | Red | Green | ? | Green | Green | Red | Green | Green | Green | ? | Green | Green | Green | Green | ? | Green | Green | Green | Green |
| Were the results for the analyses described in the methods, presented? | Green | Green | Red | Red | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Were the authors' discussions and conclusions justified by the results? | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Were the limitations of the study discussed? | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Red | Green | Green | Green | Green | Green | Green |
| Were there any funding sources or conflicts of interest that may affect the authors' interpretation of the results? | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green | Green |
| Was ethical approval or consent of participants attained? | Green | ? | ? | ? | Green | ? | ? | ? | Green | Green | Green | Green | ? | ? | ? | ? | Green | Green | Green | Green |

⁷⁵ The study number relates to the number assigned within Table 1. Red denotes 'no', green denotes 'yes', blue denotes 'not applicable', and '?' denotes 'information not available'

Appendix E: Demographic Questionnaire

Appendix E

A study of the experiences and personal characteristics of care leavers

INFORMATION ABOUT YOU

Instructions: Please provide a response for each of the following questions:

1. What is your age?

2. What is your sex?

Female ☐ Male ☐

3. What is your marital status?

Single ☐ Married ☐ Separated ☐ Divorced ☐ Widowed ☐

4. What is your ethnicity? (please tick one box)

| | | | |
|---------------|-------------------------|-------------|---------|
| White British | White & Black Caribbean | Indian | Chinese |
| White Irish | White & Black African | Pakistani | Other |
| White Other | White & Asian | Bangladeshi | |
| | White & Other | Asian other | |

5. What is your employment status?

Working fulltime ☐ Working part-time ☐ In education ☐

Unemployed ☐ Other (please specific).....☐

5. What is your current accommodation?

Private renting ☐ Social housing ☐ Supported living ☐

Home owner ☐ Other (please specific).....☐

6. What age were you when you first entered care (e.g. foster care)

7. What was the total amount of time you spent in care? (i.e. time spent outside of the family home)

8. How many care placements were you placed in? (If unsure, answer approximately)

Appendix F: Child Abuse and Trauma Scale

Appendix F**Child Abuse and Trauma Scale (CATS: Sanders & Becker-Laussen, 1995).**

In responding to the following questions, please circle the appropriate number according to the following definitions:

0 = never 1 = rarely 2 = sometimes 3 = very often 4 = always

To illustrate, here is a hypothetical question:

Did your parents criticize you when you were young? 0 1 2 3 4

If you were rarely criticized, you should circle number 1. Please answer all the questions below.

0 = never 1 = rarely 2 = sometimes 3 = very often 4 = always

1. Did your parents ridicule you? 0 1 2 3 4
2. Did you ever seek outside help or guidance because of problems in your home? 0 1 2 3 4
3. Did your parents verbally abuse each other? 0 1 2 3 4
4. Were you expected to follow a strict code of behaviour in your home? 0 1 2 3 4
5. When you were punished as a child or teenager, did you understand the reason you were punished? 0 1 2 3 4
6. When you didn't follow the rules of the house, how often were you severely punished? 0 1 2 3 4
punishment
7. As a child did you feel unwanted or emotionally neglected? 0 1 2 3 4
8. Did your parents insult you or call you names? 0 1 2 3 4
9. Before you were 14, did you engage in any sexual activity with an adult? 0 1 2 3 4
10. Were your parents unhappy with each other? 0 1 2 3 4
11. Were your parents unwilling to attend any of your school-related activities? 0 1 2 3 4
12. As a child were you punished in unusual ways (e.g., being locked in a closet for a long time or being tied up)? 0 1 2 3 4
13. Were there traumatic or upsetting sexual experiences when you were a child or teenager that you couldn't speak to adults about? 0 1 2 3 4
14. Did you ever think you wanted to leave your family and live with another family? 0 1 2 3 4

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| | |
|---|--------------|
| 15. Did you ever witness the sexual mistreatment of another family member? | 0 1 2 3 4 |
| 16. Did you ever think seriously about running away from home? | 0 1 2 3 4 |
| 17. Did you witness the physical mistreatment of another family member? | 0 1 2 3 4 |
| 18. When you were punished as a child or teenager, did you feel the punishment was deserved? | 0 1 2 3 4 |
| 19. As a child or teenager, did you feel disliked by either of your parents? | 0 1 2 3 4 |
| 20. How often did your parents get really angry with you? | 0 1 2 3 4 |
| 21. As a child did you feel that your home was charged with the possibility of unpredictable physical violence? | 0 1 2 3 4 |
| 22. Did you feel comfortable bringing friends home to visit? | 0 1 2 3 4 |
| 23. Did you feel safe living at home? | 0 1 2 3 4 |
| 24. When you were punished as a child or teenager, did you feel "the punishment fit the crime"? | 0 1 2 3 4 |
| 25. Did your parents ever verbally lash out at you when you did not expect it? | 0 1 2 3 4 |
| 26. Did you have traumatic sexual experiences as a child or teenager? | 0 1 2 3 4 |
| 27. Were you lonely as a child? | 0 1 2 3 4 |
| 28. Did your parents yell at you? | 0 1 2 3 4 |
| 29. When either of your parents was intoxicated, were you ever afraid of being sexually mistreated? | 0 1 2 3 4 |
| 30. Did you ever wish for a friend to share your life? | 0 1 2 3 4 |
| 31. How often were you left at home alone as a child? | 0 1 2 3 4 |
| 32. Did your parents blame you for things you didn't do? | 0 1 2 3 4 |
| 33. To what extent did either of your parents drink heavily or abuse drugs? | 0 1 2 3 4 |
| 34. Did your parents ever hit or beat you when you did not expect it? | 0 1 2 3 4 |
| 35. Did your relationship with your parents ever involve a sexual experience? | 0 1 2 3 4 |
| 36. As a child, did you have to take care of yourself before you were old enough? | 0 1 2 3 4 |
| 37. Were you physically mistreated as a child or teenager? | 0 1 2 3 4 |
| 38. Was your childhood stressful? | 0 1 2 3 4 |

Appendix G Experience in Close Relationship Scale: Relationship Structures

Appendix G

The Relationship Structures Questionnaire (ECR-RS)

Please answer the following questions about your mother or a mother-like figure

1. It helps to turn to this person in times of need.
strongly disagree 1 2 3 4 5 6 7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

3. I talk things over with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1 2 3 4 5 6 7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1 2 3 4 5 6 7 strongly agree

Please answer the following questions about your father or a father-like figure

1. It helps to turn to this person in times of need.
strongly disagree 1 2 3 4 5 6 7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

3. I talk things over with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

4. I find it easy to depend on this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

5. I don't feel comfortable opening up to this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1 2 3 4 5 6 7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1 2 3 4 5 6 7 strongly agree

Please answer the following questions about your dating or marital partner.

Note: If you are not currently in a dating or marital relationship with someone, answer these questions with respect to a former partner or a relationship that you would like to have with someone.

1. It helps to turn to this person in times of need.
strongly disagree 1 2 3 4 5 6 7 strongly agree

2. I usually discuss my problems and concerns with this person.
strongly disagree 1 2 3 4 5 6 7 strongly agree

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3. I talk things over with this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

4. I find it easy to depend on this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

5. I don't feel comfortable opening up to this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

6. I prefer not to show this person how I feel deep down.

strongly disagree 1 2 3 4 5 6 7 strongly agree

7. I often worry that this person doesn't really care for me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

8. I'm afraid that this person may abandon me.

strongly disagree 1 2 3 4 5 6 7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.

strongly disagree 1 2 3 4 5 6 7 strongly agree

Please answer the following questions about your best friend

1. It helps to turn to this person in times of need.

strongly disagree 1 2 3 4 5 6 7 strongly agree

2. I usually discuss my problems and concerns with this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

3. I talk things over with this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

4. I find it easy to depend on this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

5. I don't feel comfortable opening up to this person.

strongly disagree 1 2 3 4 5 6 7 strongly agree

6. I prefer not to show this person how I feel deep down.
strongly disagree 1 2 3 4 5 6 7 strongly agree

7. I often worry that this person doesn't really care for me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

8. I'm afraid that this person may abandon me.
strongly disagree 1 2 3 4 5 6 7 strongly agree

9. I worry that this person won't care about me as much as I care about him or her.
strongly disagree 1 2 3 4 5 6 7 strongly agree

Appendix H: The COPE

Appendix H

COPE

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all

2 = I usually do this a little bit

3 = I usually do this a medium amount

4 = I usually do this a lot

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.
11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.
13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.

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15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.
21. I accept that this has happened and that it can't be changed.
22. I hold off doing anything about it until the situation permits.
23. I try to get emotional support from friends or relatives.
24. I just give up trying to reach my goal.
25. I take additional action to try to get rid of the problem.
26. I try to lose myself for a while by drinking alcohol or taking drugs.
27. I refuse to believe that it has happened.
28. I let my feelings out.
29. I try to see it in a different light, to make it seem more positive.
30. I talk to someone who could do something concrete about the problem.
31. I sleep more than usual.
32. I try to come up with a strategy about what to do.
33. I focus on dealing with this problem, and if necessary let other things slide a little.
34. I get sympathy and understanding from someone.
35. I drink alcohol or take drugs, in order to think about it less.
36. I kid around about it.
37. I give up the attempt to get what I want.
38. I look for something good in what is happening.
39. I think about how I might best handle the problem.
40. I pretend that it hasn't really happened.
41. I make sure not to make matters worse by acting too soon.
42. I try hard to prevent other things from interfering with my efforts at dealing with this.
43. I go to movies or watch TV, to think about it less.
44. I accept the reality of the fact that it happened.

45. I ask people who have had similar experiences what they did.
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
47. I take direct action to get around the problem.
48. I try to find comfort in my religion.
49. I force myself to wait for the right time to do something.
50. I make fun of the situation.
51. I reduce the amount of effort I'm putting into solving the problem.
52. I talk to someone about how I feel.
53. I use alcohol or drugs to help me get through it.
54. I learn to live with it.
55. I put aside other activities in order to concentrate on this.
56. I think hard about what steps to take.
57. I act as though it hasn't even happened.
58. I do what has to be done, one step at a time.
59. I learn something from the experience.
60. I pray more than usual.

Scales (sum items listed, with no reversals of coding):

Positive reinterpretation and growth: 1, 29, 38, 59

Mental disengagement: 2, 16, 31, 43

Focus on and venting of emotions: 3, 17, 28, 46

Use of instrumental social support: 4, 14, 30, 45

Active coping: 5, 25, 47, 58

Denial: 6, 27, 40, 57

Religious coping: 7, 18, 48, 60

Humor: 8, 20, 36, 50

Behavioral disengagement: 9, 24, 37, 51

Restraint: 10, 22, 41, 49

Use of emotional social support: 11, 23, 34, 52

Substance use: 12, 26, 35, 53

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Acceptance: 13, 21, 44, 54

Suppression of competing activities: 15, 33, 42, 55

Planning: 19, 32, 39, 56

Appendix I: Study Poster

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Appendix J: Email to Participants

Appendix J

Dear

Thank you agreeing to take part in the study. Your help is sincerely appreciated.

I am completing the project as part of my Doctoral thesis. I have attached the poster advert for the study above. The aim of the study is to further the understanding of the experiences of individuals who have left care, in order to improve service provision for this group.

The study involves completing four questionnaire online and two questionnaires by post. This should take no longer than 30 minutes in total. If you would like to take part, **please could you send an address that I can send the postal questionnaires to** (a stamped addressed envelope will be provided for their return). Your information will be kept securely in accordance with Data Protection Act (1998), and GDPR. The study has been granted ethical approval by the University of Southampton Ethics Committee.

For the online survey please follow the link below to complete the survey. **Please put number '011' in the 'participant number' (so that completed questionnaires can be anonymously kept together).**

<https://www.isurvey.soton.ac.uk/28781>

Once you have completed the online survey and returned the postal questionnaire I will email you your amazon voucher.

Thanks again, and I look forward to hearing from you.

Appendix K: Participant Information Sheet

Appendix K



Participant Information Sheet

Study Title: A study of the experiences and personal characteristics of care leavers

Researcher: Melanie Jarvis, Dr Kate Willoughby

ERGO number: 31663

Version Number: 9: **Date:** 04/02/2019

You are being invited to take part in the above research study. To help you decide whether you would like to take part or not, it is important that you understand why the research is being done and what it will involve. Please read the information below carefully and ask questions if anything is not clear or you would like more information before you decide to take part in this research. You may like to discuss it with others but it is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

I am a Trainee Clinical Psychologist and am studying towards my Doctorate in Clinical Psychology at the University of Southampton. As part of my doctorate I will be conducting a thesis project. This study will look into some of the experiences and personal characteristics of people who have left care settings and the difficulties they face. It is hoped that the study will help in the development resources and services for care leavers.

Why have I been asked to participate?

I am asking individuals who, as children, had experience of being in care to take part in the study. The research will focus on the difficulties and experiences of these individuals.

What will happen to me if I take part?

You will be asked to fill in 6 questionnaires (four online and two by post). This should take approximately 40 minutes to 1 hour to complete. If you are happy to take part, we will send you two questionnaires in the post (with a stamped addressed envelope for return), and provide the link to the online survey.

The questionnaires will ask you about a range of topics including your early childhood experiences, your current relationships, and the way in which you cope with stress. Please note that some of the topics asked about are sensitive in nature. Specifically, one of the questionnaires asks about childhood experiences. Please read the 'Are there any risks involved?' section carefully before deciding if you would like to commence the survey.

Are there any benefits in my taking part?

The information from this study will help us understand some of the difficulties care-leavers face and so hopefully let us know what further services might be needed to help people in similar situations to yourself.

You will receive a £5 amazon voucher as compensation for taking part, once you have returned the postal questionnaires and completed the online survey.

Are there any risks involved?

Some of the questionnaires you will be asked to fill out are sensitive in nature, with one of the questionnaires asking about childhood experiences. You may find that this triggers some distress for you. Should you wish to discontinue at this stage then you are free to do so. We encourage participants to read the introduction to the questionnaires (which will appear at the beginning of each section) in advance of answering any questions.

As a way to support people with difficult feelings that may come up we have included a creative writing task at the end of the project as a way of managing difficult feelings. We would encourage all participants to have a go at this, particularly if you notice feeling distressed.

If you continue to feel distressed following the creative task we encourage you to seek support for this. You can discuss any such difficulties with your GP or you may wish to consider the following sources of support:

- The Samaritans- a charity who provide free and confidential support to people 24 hours a day.
 - Free phone on: 08457 90 90 90
 -
- Help at hand- a charity that support children in care and care-leavers with a range of social and emotional difficulties.
 - Free phone on: 0800 528 0731
 - Email at: help.team@childrenscommissioner.gov.uk
- Catch 22; a charity providing a range of information and support to children in care and care-leavers
 - www.catch-22.org.uk

The following websites provide freely accessible self-help resources aimed at supporting individuals who are experiencing anxiety and depression:

- Mood Gym: <https://moodgym.com.au/>

- Beating the Blues: <http://www.beatingtheblues.co.uk/>

If you continue to feel distressed following taking part in the research then you can also discuss this with the research supervisor,

Dr Kate Willoughby at:

Doctoral Programme in Clinical Psychology, University of Southampton, School of Psychology,
Building 44 Room 3091, Highfield Campus, Southampton, Hants SO17 1BJ

Tel: 023 8059 5321/29069

Email: K.Willoughby@soton.ac.uk

What data will be collected?

The questionnaires you will be asked to complete will ask for personal information about you and your experiences. All the information collected from the questionnaires will be kept strictly confidentially, it will not be shared with anyone other than the researchers named on this information sheet. You will be allocated a unique identification number which will be put on all the questionnaires and will therefore make them anonymous. All the information we collect about you as part of this study will be kept in a secure place only accessible by the named researchers, including your provided correspondence address. The overall results of this study will be written up in a report, you will remain anonymous in this report. You will be able to get a summary of the results when they are available by contacting us.

Will my participation be confidential?

Your participation and the information we collect about you during the course of the research will be kept strictly confidential.

Only members of the research team and responsible members of the University of Southampton may be given access to data about you for monitoring purposes and/or to carry out an audit of the study to ensure that the research is complying with applicable regulations. Individuals from regulatory authorities (people who check that we are carrying out the study correctly) may require access to your data. All of these people have a duty to keep your information, as a research participant, strictly confidential.

Do I have to take part?

No, it is entirely up to you to decide whether or not to take part. If you decide you want to take part, you will need to sign a consent form to show you have agreed to take part.

What happens if I change my mind?

You have the right to change your mind and withdraw at any time without giving a reason and without your participant rights being affected.

If you withdraw from the study, we will keep the information about you that we have already obtained for the purposes of achieving the objectives of the study only. If you withdraw from the study after completion of the questionnaires, it may not be possible to remove the data once your personal information is no longer linked to the data.

What will happen to the results of the research?

The project will be written up in a thesis report, and may later be published. Your personal details will remain strictly confidential. Research findings made available in any reports or publications will not include information that can directly identify you without your specific consent.

Where can I get more information?

If you have any questions or would like further information, please either contact Melanie Jarvis (researcher) at mj3g16@soton.ac.uk.

Or Dr Kate Willoughby (supervisor) at:

Doctoral Programme in Clinical Psychology
University of Southampton
School of Psychology
Building 44 Room 3091
Highfield Campus
Southampton
Hants SO17 1BJ
Tel: 023 8059 5321/29069
Email: K.Willoughby@soton.ac.uk

What happens if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researchers who will do their best to answer your questions.

If you remain unhappy or have a complaint about any aspect of this study, please contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, rgoinfo@soton.ac.uk).

Data Protection Privacy Notice

The University of Southampton conducts research to the highest standards of research integrity. As a publicly-funded organisation, the University has to ensure that it is in the public interest when we use personally-identifiable information about people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use information about you in the ways needed, and for the purposes specified, to conduct and complete the research project. Under data protection law, 'Personal data' means any information that relates to and is capable of identifying a living individual. The University's data protection policy governing the use of personal data by the University can be found on its website (<https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page>).

Appendices

This Participant Information Sheet tells you what data will be collected for this project and whether this includes any personal data. Please ask the research team if you have any questions or are unclear what data is being collected about you.

Our privacy notice for research participants provides more information on how the University of Southampton collects and uses your personal data when you take part in one of our research projects and can be found at

<http://www.southampton.ac.uk/assets/sharepoint/intranet/Is/Public/Research%20and%20Integrity%20Privacy%20Notice/Privacy%20Notice%20for%20Research%20Participants.pdf>

Any personal data we collect in this study will be used only for the purposes of carrying out our research and will be handled according to the University's policies in line with data protection law. If any personal data is used from which you can be identified directly, it will not be disclosed to anyone else without your consent unless the University of Southampton is required by law to disclose it.

Data protection law requires us to have a valid legal reason ('lawful basis') to process and use your Personal data. The lawful basis for processing personal information in this research study is for the performance of a task carried out in the public interest. Personal data collected for research will not be used for any other purpose.

For the purposes of data protection law, the University of Southampton is the 'Data Controller' for this study, which means that we are responsible for looking after your information and using it properly. The University of Southampton will keep identifiable information about you for 10 years after the study has finished after which time any link between you and your information will be removed.

To safeguard your rights, we will use the minimum personal data necessary to achieve our research study objectives. Your data protection rights – such as to access, change, or transfer such information - may be limited, however, in order for the research output to be reliable and accurate. The University will not do anything with your personal data that you would not reasonably expect.

If you have any questions about how your personal data is used, or wish to exercise any of your rights, please consult the University's data protection webpage (<https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page>) where you can make a request using our online form. If you need further assistance, please contact the University's Data Protection Officer (data.protection@soton.ac.uk).

Thank you.

Thank the individual for taking the time to read the information sheet and considering taking part in the research.

Appendix L: Consent Form

Appendix L

CONSENT FORM

Study title: A study of the experiences and personal characteristics of care leavers

Researcher name: Melanie Jarvis, Dr Kate Willoughby

ERGO number: 31663

Please initial the box(es) if you agree with the statement(s):

| | |
|---|--|
| I have read and understood the information sheet version 6 (date 09/1/2018) and have had the opportunity to ask questions about the study. | |
| I agree to take part in this research project and agree for my data to be used for the purpose of this study. | |
| I understand my participation is voluntary and I may withdraw at any time for any reason without my participation rights being affected. | |
| I understand that if I withdraw from the study that it may not be possible to remove the data once my personal information is no longer linked to the data. | |
| I understand that I will not be directly identified in any reports of the research. | |

Name of participant (print name).....

Signature of participant.....

Date.....

Name of researcher (print name).....

Signature of researcher

Date.....

--

Appendix M: Mood Repair Task

Appendix M

Mood Repair Task

Ethics ID: 31663

INSTRUCTIONS

This is an optional task which can be completed at any time after taking part in the research study.

Please read these general instructions completely before you begin writing.

Expressive writing can be a useful way to alleviate distress and promote emotional wellbeing. Pennebaker (2004) developed an expressive writing task to promote health and wellbeing in different groups of people, and his writing tasks have been replicated numerous of times with positive outcomes in relation to reducing distress, and promoting psychological wellbeing (Pennebaker, 1997; Krpan et al., 2013). Pennebaker (1997) highlights that the process of expressive writing can help people to give space to difficult feelings so that they can be processed, helping to ease emotional trauma.

The Pennbaker Paradigm (explained below) will guide you through an example of an expressive writing task. If you chose to complete the task your writing will not be shared with the researcher or anyone else. It is just for you.

Creative writing task

In your writing, I would like you to really let go and explore your very deepest emotions and thoughts about the difficult experiences in your life. You might tie this to other parts of your life: your childhood, your relationships with others, including parents, lovers, friends, relatives, or other people important to you. You might link your writing to your future and who you would like to become your future, or to who you have been, who you would like to be, or who you are now. Not everyone has had a single trauma, but all of us have had major conflicts or stressors, and you can write about these as well. All your writing is confidential.

There will be no sharing of content. Do not worry about form or style, spelling, punctuation, sentence structure, or grammar.

1. **Time:** Write for approximately 20 minutes. You can repeat this as many times as you wish in the days to come.
2. **Topic:** What you choose to write about should be extremely personal and important to you.
3. **Write continuously:** Do not worry about punctuation, spelling, and grammar. If you run out of things to say, draw a line or repeat what you have already written. Keep pen on paper.
4. **Write only for yourself:** You may plan to destroy or hide what you are writing. Do not turn this exercise into a letter. This exercise is for your eyes only.
5. **Observe the Flip-out Rule:** If you get into the writing, and you feel that you cannot write about a certain event because it will push you over the edge, STOP writing!
6. **Expect heavy boots:** Many people briefly feel a bit saddened or down after expressive writing, especially on the first day or so. Usually this feeling goes away completely in an hour or two.

Give yourself sometime after writing to reflect on what you have written and to be compassionate with yourself. If you are worried about someone else seeing what you wrote, put your writing in a safe place, or simply tear it up or shred it. But if you are not concerned that someone may read what you wrote, you may want to keep your writing, so you can come back to it after you have completed

Appendix N: Debrief Statement

Appendix N



Debrief form

Ethics ID:31663

A study of the experiences and personal characteristics of care leavers (debriefing)

Researchers: Melanie Jarvis & Dr Kate Willoughby

Thank you for taking part in this study. This study was looking into some of the experiences and personal characteristics of care-leavers and the difficulties they face. It is hoped that the study will help in the development of resources within services for care-leavers. You can get a summary of the results when they are available by contacting us (details below).

The survey covered topics of a sensitive nature, and it may be that some of the questions caused you to experience some distress. We hope that you felt able to have a go at the creative writing task which is included to support with the processing of difficult emotions. However sometimes an emotional reaction can feel more intense. These kinds of feelings can sometimes last for quite a long time and it can affect the way people feel about themselves, the way they think about things and the way they cope and do things in their everyday life.

This may not apply to you, but if you feel this way after taking part in this study, you might find it helpful to get some advice and support.

WHERE TO FIND ADVICE & SUPPORT

If you feel you need some help and support, or if you just want to talk to someone in confidence, please contact any of these people who will be able to help you:

- **The Samaritans-** a charity who provide free and confidential support to people 24 hours a day.
 - **Free phone on: 08457 90 90 90**
 -
- **Help at hand-** a charity that support children in care and care-leavers with a range of social and emotional difficulties.
 - **Free phone on: 0800 528 0731**
 - **Email at: help.team@childrenscommissioner.gov.uk**
- **Catch 22;** a charity providing a range of information and support to children in care and care-leavers
 - **www.catch-22.org.uk**

Appendices

The following websites provide freely accessible self-help resources aimed at supporting individuals who are experiencing anxiety and depression:

- **Mood Gym:** <https://moodgym.com.au/>
- **Beating the Blues:** <http://www.beatingtheblues.co.uk/>

If you have any further concerns, questions, or would like further information, please contact Dr Kate Willoughby (Research supervisor and Clinical Psychologist) at:

Doctoral Programme in Clinical Psychology
University of Southampton
School of Psychology
Building 44 Room 3091
Highfield Campus
Southampton
Hants SO17 1BJ
Tel: 023 8059 5321/29069
Email: K.Willoughby@soton.ac.uk

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the Chair of the Ethics Committee, Department of Psychology, University of Southampton, Southampton, SO17 1BJ. Phone: (023) 8059 5578.

Appendix O: Ethics Approval

Appendix O⁷⁶

Approved by Faculty Ethics Committee - ERGO II 31663.A3

Approved by Faculty Ethics Committee - ERGO II 31663.A3



ERGO II – Ethics and Research Governance Online <https://www.ergo2.soton.ac.uk>

Submission ID: 31663.A3

Submission Title: Childhood abuse in care-leavers: The role of attachment and early maladaptive schemas (Amendment 3)

Submitter Name: Melanie Jarvis

Your submission has now been approved by the Faculty Ethics Committee. You can begin your research unless you are still awaiting any other reviews or conditions of your approval.

Approved by Faculty Ethics Committee - ERGO II 316

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ERGO II – Ethics and Research Governance Online <https://www.ergo2.soton.ac.uk>

Submission ID: 31663.A2

Submission Title: Childhood abuse in care-leavers: The role of attachment and early maladaptive schemas (Amendment 2)

Submitter Name: Melanie Jarvis

Your submission has now been approved by the Faculty Ethics Committee. You can begin your research unless you are still awaiting any other reviews or conditions of your approval.

Approved by Faculty Ethics Committee - ERGO II 31663.A1

UNIVERSITY OF
Southampton

ERGO II – Ethics and Research Governance Online <https://www.ergo2.soton.ac.uk>

Submission ID: 31663.A1

Submission Title: Childhood abuse in care-leavers: The role of attachment and early maladaptive schemas (Amendment 1)

Submitter Name: Melanie Jarvis

Your submission has now been approved by the Faculty Ethics Committee. You can begin your research unless you are still awaiting any other reviews or conditions of your approval.

Approved by Faculty Ethics Committee - ERGO II 31663

UNIVERSITY OF
Southampton

ERGO II – Ethics and Research Governance Online <https://www.ergo2.soton.ac.uk>

Submission ID: 31663

Submission Title: Childhood abuse in care-leavers: The role of attachment and early maladaptive schemas

Submitter Name: Melanie Jarvis

Your submission has now been approved by the Faculty Ethics Committee. You can begin your research unless you are still awaiting any other reviews or conditions of your approval.

⁷⁶ Please note that Ethics amendments were sought to allow for recruitment through further channels (e.g. social care teams)

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