CHILDHOOD ADVERSITY, SHAME AND SELF-COMPASSION, AND THEIR RELATIONSHIP WITH HARM

KERRI GARBUTT

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Thesis Abstract

This thesis has been formed through clinical experience as a practitioner psychologist to develop original research that has direct clinical impact. It includes empirical research, a systematic review, and a reflective summary on the process of developing as an advanced researching practitioner. The empirical research included a large-scale custodial and community sample (N=1111) to establish psychological and modifiable factors of causation between adverse childhood experiences (ACE) and later harm inflicted on the self and others. As part of this empirical research, an integrated conceptualisation of shame and its multidimensional nature is proposed. As such the introduction includes a thorough background on this project's conceptualisation of shame. The empirical research highlights the importance of ACE, shame, and to a lesser extent self-compassion, in understanding the risk of harm to the self and others. It also indicates that shame and self-compassion are partial mediators in the relationship between ACE and harm. Three plausible Structural Equation Models are proposed to explain the relationship between ACE, shame, self-compassion and later harm to self and others, with harm to others separated into 'psychological and physical harm' and 'sexual harm'. Implications for theory and clinical practice are presented as well as future directions for research. The thesis also includes a systematic review, including a narrative review and meta-analysis, exploring whether psychological interventions reduce shame. Thirteen studies were included in this review and the results indicate that overall psychological interventions can be effective at reducing shame. Additionally, the review found that in the absence of psychological intervention, such as within control conditions, no reduction in shame was consistently observed. Finally, reflections of the process of developing from a practitioner who conducts occasional research to a more confident and competent advanced researching practitioner are presented.

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CHAPTER ONE:

THESIS INTRODUCTION

Thesis Introduction

Two areas that can concern society is the human capacity to inflict harm on the self and harm on others. These not only have an impact on the victim of harm and the perpetrator, but also those that care for these individuals. Additionally, to the physical and psychological damage caused by these harmful behaviours, there are significant costs to wider society. For example, within the United Kingdom there are approximately 1.6 million crimes against a person (e.g. violent and sexual offences) recorded a year (Office for National Statistics, July 2018) and proven reoffending rates are between 24.5% and 42.5% (Ministry of Justice, 2018). The average cost of placing an individual in custody for a year is over £30K (Ministry of Justice, October 2015) and within custody, there are over 26,000 assaults on staff and other prisoners on an annual basis (Ministry of Justice National Statistics, 2017). Self-harm and suicide also remain key areas of public concern. Within the UK there are approximately 6000 deaths by suicide recorded per year and self-harm incidents are considered significantly higher (Office for National Statistics, December 2017). Even higher levels of self-harm and suicide are reported within prison populations, with approximately 100 incidents of suicide and 40,000 incidents of self-harm reported annually (Ministry of Justice National Statistics, 2017). Therefore, research that increases understanding into the psychological factors associated with an increased risk of inflicting harm on the self and others is valuable not only within the field of forensic psychology but also for wider society. Observations from clinical practice highlight how important factors such as adverse childhood experiences, shame and self-compassion are in our understanding of harm to the self and harm to others. However, these factors are often missed or misunderstood, especially within forensic settings. This thesis, therefore, identifies a gap in knowledge from both a theoretical and clinical practice perspective and forms the basis for this original thesis, which in turn has direct clinical implications.

This thesis introduction will briefly summarise the link between adverse childhood experiences and harm inflicted on the self and others, as well as highlight the current gaps within this research. Two potential mediators that may help to explain a more complex

relationship between ACE and harm are also presented along with the implications of identifying these mediators. Finally, the overarching aim of the thesis along with its structure is presented.

Childhood experiences of adversity and its potential association with later antisocial and offending behaviours is a key area of interest within the field of criminal justice (Widom, 1995). Research has found a relationship between adverse childhood experiences and later offending (e.g. Maxfield & Widom, 1996; Ardino, 2012; Fox, Perez, Cass, Baglivio & Epps, 2015) and that those that have committed offences have reported higher levels of adverse childhood experiences than the general population (e.g. Dutton & Hart, 1992; Levenson, Willis, & Prescott, 2014, 2015). Research has also indicated a link between childhood adversity, self-harm, suicidal ideation, and attempted suicide (e.g. Power, Gobeil, Beaudette, Ritchie, Brown, & Smith, 2016; Stansfeld, Clark, Smuk, Power, Davidson, & Rodgers, 2017). Within the UK, there are over 70, 000 children currently within the care of local authorities with the majority of these placed in care due to them experiencing abuse and neglect (Department of Education National Statistics, September 2017). Finding ways to prevent these children from taking life paths that will involve them inflicting harm on themselves or others is vital for their own happiness and wellbeing as well as the wellbeing of others. Importantly, not all children who experience adversity go on to offend in later life or resort to self-harm or suicide. Therefore, establishing what mediates the relationships between childhood adversity and harm to self (e.g. self-harm, attempted suicide) and others (e.g. offending) is a crucial focus for research. Recent research has explored some potential mediators between childhood adversity and offending behaviours (e.g. negative emotionality, self-criticism, narcissistic vulnerability etc) as well as between childhood adversity and self-harm/suicide (e.g. Weierich & Nock, 2008).

Shame and self-compassion have been presented as important factors that may be potential mediators in the relationships between early childhood experiences of adversity and behaviours that result in harm to others or harm to themselves. Shame has been

associated with adverse experiences in childhood (e.g. Gilbert, Cheung, Grandfield, Campey, & Irons, 2003; Feiring & Taska, 2005; Platt & Freyd, 2015; Dorahy, Middleton, Seager, Williams, & Chambers, 2016) and offending (e.g. Feiring, Taska, Lewis, 1996; Stuewig & McCloskey, 2005; Chakhssi, de Ruiter, & Bernstein, 2013). Additionally, research has found that self-compassion is negatively associated with childhood adversity (Tanaka, Wekerle, Schmuck, & Paglia-Boak, 2011; Morley, Terranova, Cunningham & Kraft, 2016) and offending (Murphy, Stosny, & Morrel, 2005; Neff & Vonk, 2009). Similar relationships have also been observed between self-harming (e.g. self-harm, attempted suicide) behaviours and shame (Dutra, Callahan, Forman, Mendelsohn & Herman, 2008; Bryan, Ray-Sannerud, Morrow & Etienne, 2013) as well as self-compassion (Bryan, Theriault, & Bryan, 2015). Self-compassion is also considered as a method of inoculation against shame (Gilbert & Proctor, 2006; Johnson & O'Brien, 2013). Therefore, shame and self-compassion could be key mediators in the relationship between early experiences of childhood adversity and harm to self and others. However, previous research has mainly been correlational, used small samples from restrictive populations and/or not reflected contemporary conceptualisations of these potential mediators (e.g. shame).

If shame and self-compassion are found to be key mediators, these research findings will contribute valuable information to the question focussed upon why some individuals who experience childhood adversity go on to offend or harm themselves and others do not. This will also give stronger evidence to support the recommendation for trauma-informed care (Miller & Najavits, 2012; Levenson, 2014) and compassionate interventions (Gilbert, 2009; Neff, 2011; Lee & James, 2012) within community, clinical and forensic settings. It will also indicate effective and targeted treatment pathways to reduce offending, future recidivism and risk of self-harm and suicide in adults. Additionally, it will suggest treatment approaches for children who experience abuse, so that they are able to psychologically survive these experiences in a manner that does not end in harm to themselves or others, or therefore the creation of further victims.

Aim and structure of the thesis

The overarching aim of this original thesis is to advance our understanding of the contribution ACE, shame and self-compassion have to behaviours in later life that lead to harm to the self and harm to others. Additionally, this thesis will present our current knowledge of evidence-based psychological therapies that can reduce shame. Finally, the thesis will reflect on the continuing development of an advanced research practitioner.

The initial chapter firstly introduces the background to this multifaceted topic, provides detailed definitions and includes a comprehensive exploration of the theoretical underpinnings of shame and its contemporary conceptualisation. Following this, an original large-scale empirical research project building on this past literature and advancing theoretical and clinical knowledge is presented. This chapter presents psychological pathways between Adverse Childhood Experiences and later harm to self and others, through modifiable psychological factors, shame and self-compassion. Chapter three includes the first systematic review to identify whether psychological interventions can reduce shame. Chapter four presents the researcher's individual learning plan with reflections on developing advanced research skills by combining clinical expertise with research and creating clinically relevant and cutting-edge research that can have a direct clinical impact. Finally, chapter five evidences the body of literature and their references and chapter six provides relevant additional information within the appendices.

CHAPTER TWO:

EMPIRICAL RESEARCH

"Childhood Adversity, Shame, and Self-Compassion, and their Relationship with Harm"

Abstract

Introduction

Self-harm, suicide and harm inflicted on others remain key areas of public concern. Links have been made between Adverse Childhood Experiences (ACE) and later self-harming and offending behaviours. However, research has not fully explored the interplay between ACEs and other psychological factors, such as shame and self-compassion, and therefore not identified modifiable psychological factors that could be targeted to reduce risk of harm.

Aim

To establish the role that shame, self-compassion and childhood adversity have in understanding risk of harm. Therefore, identifying the psychological threads of causation between ACE and harm to self and others.

Method

A total of 1111 participants, from prison and community-based samples, completed an anonymous survey. This survey included valid and reliable measures of ACEs, shame, self-compassion and harming behaviours towards self and others.

Results

The study analysed the relationships between shame, self-compassion and childhood adversity and their influence on behaviours that cause harm to the self and others. There was a significant correlation between variables and plausible SEM models were identified. Each model indicates the importance of shame, and to a lesser extent self-compassion, in the path between ACE and later harm to self and harm to others.

Conclusion:

This research advances our understanding of the consequences of ACE and the underlying factors that increase the risk of harm to self and others. It identifies modifiable psychological factors that can be targeted to reduce risk of harm inflicted on the self and others. It also provides support for shame as a multidimensional concept.

Introduction

This original research aims to explore the relationship between Adverse Childhood Experiences (ACE) and harm inflicted on the self and others. It will explore two important and potentially modifiable psychological factors that mediate this relationship, namely shame and self-compassion. Therefore, this research may identify psychological threads of causation and psychologically informed methods of reducing risk of harm. This research will identify characteristics of those individuals most at risk of harm and the psychological factors to address within trauma-informed care. Given the potentially destructive impact of ACE, the high rate of self-harm and suicide across populations, and the impact of harm inflicted on others, establishing risk factors and treatment needs to address these concerns is vital.

This paper will present the previous literature to place this study in context. Firstly, ACE and its relationship with harm inflicted on the self and others will be presented. Alongside this, the relationship between ACE and shame is highlighted and in turn, it is postulated that shame may be a potential mediator between ACE and later harm to self and others. Due to its multifaceted nature, the tapestry of theories contributing to our understanding of shame will be presented, along with the conceptualisation of shame used within this study. In line with this contemporary and integrated conceptualisation of shame, past literature on the links between shame and harm inflicted on the self and others is presented and explored. This, in turn, highlights further evidence for shame as a mediator between ACE and later harm. Following this, self-compassion is presented alongside its relationship with ACE, shame, harm to self and others and therefore it's potential to mediate the effects of ACE. This paper then argues, given past literature and an integrated conceptualisation of shame, that shame and self-compassion may constitute missing psychological links between ACE and later life sequelae, such as self-harm and harm to others. As shame and self-compassion are modifiable psychological factors, it is also plausible that these could then be targeted to reduce the risk of self-harm and harm to others. Finally, the specific aims of the current research will be presented with hypothesised causal pathways between ACE and later harm to self and others.

Adverse Childhood Experiences

Adverse Childhood Experiences (ACE) describe a range of negative experiences that took place in an individual's childhood. Within the literature, ACE can come in various forms but are usually captured within overarching themes of abuse including sexual, emotional, psychological, physical, and neglect (Vachon, Krueger, Rogosch, & Cicchetti, 2015). Although ACE are associated with a range of negative consequences across the lifespan (Bellis, Lowey, Leckenby, Hughes, & Harrison, 2014) it is also recognised that some children transcend the abuse they experienced and go on to live a healthy fulfilled life (Bearer, Trickett, Kaplan, & Mennen, 2015; Trickett & Kurtz, 2004). In fact, there can be post-traumatic growth from ACE and increased resilience (Bonanno, 2004; Kwong & Hayes, 2017; Poole, Dobson, & Pusch, 2017). Therefore, childhood adversity can result in both negative and positive consequences.

ACE and Self Harm

Despite some inconsistency within the literature, there is a growing body of research that has linked ACE to an increased risk of self-harming behaviours (e.g. Chartrand, Bhaskaran, Sareen, Katz, & Bolton, 2015; Ford & Gomez, 2015; Pinder, Iversen, Kapur, Wessely, & Fear, 2011; Liu, Scopelliti, Pittman, & Zamora, 2018; Moore, Gaskin, & Indig, 2015; Vaughn, Salas-Wright, Underwood, & Gochez-Kerr, 2015). One study (Chartrand, et al., 2015) examined a large sample of 5336 participants that had been referred to psychiatric services. Within this sample, 44.6% (n=2380) had never engaged in self-harm behaviours and 4.3% (n=230) had used self-harm. They found that those that had self-harmed were more likely to have been physically or sexually abused as a child (OR 2.73; 95% CI 1.84 to 4.06, $P < 0.001$). This study has strengths in terms of its large sample size; however, the findings are not generalisable to non-psychiatric samples who self-harm and the methodology employed suggests a relationship between ACE and self-harm but cannot evidence causality. Overall, past literature, however, has been criticised for using different definitions of self-harm and having limited generalisability. It is also criticised for considering ACE as a unitary construct and not recognising that the association between

ACE and self-harm could be through differing mediational pathways (i.e. equifinality) (Liu, et al., 2018). When exploring the different subtypes of ACE there has certainly been some inconsistency across studies. However, despite this, a recent meta-analysis of 71 studies concluded that ACE and the various ACE subtypes (e.g. physical, sexual, physical neglect, emotional abuse), excluding emotional neglect, are moderately associated with self-harming behaviours (Liu, et al., 2018). A cumulative effect, with the greater number of ACE increasing the risk of self-harming behaviours, has also been identified (Lereya, Copeland, Costello, Wolke, 2015; Steine, et al., 2017).

The cumulative effect of ACEs is an important issue to raise given that recent research found greater support for the relationship between cumulative ACE and negative life sequalae than individual incidents or types of ACE in isolation (Hughes, et al., 2017). This cumulative effect was mirrored in a recent meta-analysis of 71 studies (Lui, et al., 2018), which found that cumulative ACE demonstrated a stronger association with self-harm than individual subtypes. For example, the association between self-harm and subtypes of ACE were smaller (odds ratio 1.84 – 3.03) than the association found between cumulative ACE and self-harm (odds ratio 3.42). Additionally, research has also explored the impact of the specific number of ACEs, finding that those that had over four ACEs were significantly more likely to engage in health-harming behaviours than those with no ACEs (Bellis, et al., 2014). This cumulative effect may indicate the importance of intervening variables in understanding the long-term consequences of ACE. For example, with repeated incidents of abuse more likely to impact on intervening variables, such as shame, which in turn may increase other dysfunctional conditions or behaviours.

Additional research proposes that the relationship between ACE and self-harm can be influenced by other factors such as the severity and frequency of ACE and self-harming behaviours. A recent study of a large sample of adolescents found that childhood sexual abuse and peer physical abuse were associated with all types of self-harm; peer physical abuse, sexual abuse, emotional abuse and emotional neglect were associated with 'high risk' self-harming behaviours; and finally, 'low risk' self-harming behaviours were

associated with peer bullying, life stressors and sexual abuse (Han, Wang, Xu, Su, 2018). In another study, it has also been noted that considering subtypes of ACE as well as the frequency of self-harming behaviours may provide a greater understanding of the relationship, as sexual abuse was linked with frequent self-harming behaviours and physical abuse was linked with intermittent self-harming behaviours (Yates, Carlson, & Egeland, 2008). Therefore, consideration of self-harm severity and frequency of self-harming may be helpful in aiding our understanding of the relationship between ACE and self-harm. There has also been some recognition that the relationship between ACE, particularly emotional neglect, and self-harm is increased when self-criticism is a mediator (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007), which suggests a more complex pathway between ACE and self-harm exists. This further supports the notion that there may be different mediational pathways between subtypes of ACE and self-harm (i.e. equifinality) that have not been fully explored and identified. Given that self-harm is also distinguished from suicide, and with the latter being more difficult to research, alternative pathways may also present between ACE and suicide.

ACE and Suicide

ACE have been linked to increased risk of suicide (Bruffaerts, et al, 2010; Godet-Mardirossian, Jehel, & Falissard, 2011; Jardim, Novelo, Spanemberg, Gunten, Engroff, Nogueira, & Neto, 2018; Moore, et al., 2015; Pinder, et al., 2011; Skopp, Luxton, Bush, & Sirotin, 2011). Bruffaerts and colleagues (2010) also considered the age of onset of suicidal ideation and attempted suicides in relation to ACE. Although there were fluctuations across different life stages the link between ACE and suicide remained fairly consistent across the lifespan. Suicidal ideation and suicide attempts have been associated with physical abuse, sexual abuse, psychological abuse, emotional abuse, neglect, bullying, poor parent-child attachment, witnessing domestic violence, being in care and experiencing parental loss through absence or divorce (e.g. Bruffaerts, et al, 2010; Enns, Cox, Afifi, Graaf, Have, & Sareen, 2006; Fanous, Prescott, & Kendler, 2004; Fergusson, Woodward, & Horwood, 2000; Ford & Gomez, 2015; Jardim, et al., 2018; Klomek, et al., 2009; Mills, Guerin, Lynch, Daly, & Fitzpatrick, 2004; Molnar, Berkman, & Buka, 2001; O'Leary & Gould, 2009; Pompili, et al., 2009; Swogger, You, Cashman-Brown,

& Conner, 2011; Stansfeld, Clark, Smuk, Power, Davidson & Rodgers, 2017). One key study (Stansfeld, et al., 2017) included 9377 participants from the UK 1958 British Birth Cohort Study. They prospectively assessed childhood adversity at 7, 11 and 16 years of age and suicidal ideation at 'midlife' (e.g. 45 years of age). This study found that those that had three or more childhood adversities were associated with suicidal ideation at 45 years of age (odds ratio 4.31). The study also established that other factors, such as internalising/externalising disorders and interpersonal difficulties, partially mediated this relationship. This study has clear strengths as a longitudinal cohort study with large sample size and a triangulated ACE data collection approach (e.g. data from the child, parents, and teachers). However, the study examined suicidal ideation rather than suicide and only a very small proportion of individuals that experience suicidal ideation continue to suicide and therefore the findings cannot be confidently generalised to suicidal behaviour. Disclosure of physical and sexual abuse in childhood was also gathered retrospectively, which represents ethical strengths within the study but also results in limitations associated with retrospective data collection. The authors of the study also recognise that there are likely other key mediators that were not examined within this study, with low self-worth being identified as one potential factor.

Despite links found between ACE and suicide in other studies, in an outpatient sample of adults with depression there was no link between childhood adversity and suicide found, however, a significant relationship was found between low maternal care and suicide attempts (Johnstone, Carter, Luty, Mulder, Frampton, & Joyce, 2016). Despite this research indicating a link between suicide and low maternal care, other research found maternal absence had no association with suicide (Stansfeld, et al., 2017). Therefore, there may be a more indirect and complex pathway from ACE to risk of suicide than some of the research currently presents. In addition, the distinction between suicidal ideation, suicide attempts and suicidal deaths are important to distinguish between, with a recent meta-analysis indicating that ACE was only a key predictor for suicidal ideation but not suicide attempts or suicidal deaths (Franklin, et al., 2017).

Although there have only been a limited number of studies that have considered a combined effect of multiple risk factors (Franklin, et al., 2017), similar to the findings with self-harm behaviours, it has also been considered that multiple ACE has a cumulative effect on the risk of suicide (Bruffaerts, et al, 2010; Enns, et al., 2006; Fergusson, et al., 2000; Ford & Gomez, 2015; Stansfeld, et al., 2017), with multiple ACE also distinguishing those who attempted suicide from those who engaged in suicidal ideation (Stein, et al., 2010). Risk of suicide in individuals who had experienced ACE appears to be raised when they also have high levels of shame. For example, women that had experienced childhood sexual abuse and shame combined were at a heightened risk of suicidal ideation (You, Talbot, He, & Conner, 2012). This mirrors the findings of Glassman and colleagues (2007), where self-criticism, an element of shame, mediated the relationship between ACE and self-harming behaviours. This may reflect an understanding of a more complex pathway between ACE and suicide than a simple direct association between the two. Although the highlighted research provides areas of consideration, caution is taken with regards to the findings that explore the predictors of attempted suicides and actual suicides, as this type of research is vulnerable to key limitations such as the inherent low base rates. The lack of confidence that we currently have in relation to understanding the predictors of suicide is reflected in a recent meta-analysis of 365 studies, that found that the predictors of suicidal thoughts and behaviours were weak, and at best, they performed only slightly better than chance (Franklin, et al., 2017). Further to this, these studies received criticism for not shifting greatly in terms of the risk factors explored or methodologies used and as such it was considered not surprising that our limited understanding of the predictors of suicide has remained fairly constant over the last 50 years (Franklin, et al., 2017). Therefore, further research is needed to aid our understanding of the relationship between ACE and harm to self in the form of suicidal thoughts and behaviours. Similar to literature focussed on self-harm this literature also suggests a more complex pathway between ACE and suicide that needs to be explored.

There are clearly gaps in our understanding of the complex relationship between ACE and behaviours that lead to harming the self or ending one's life. This complexity has been reflected across populations (e.g. clinical and community), including forensic (e.g. those

that have been convicted for inflicting harm on others) populations (Dixon-Gordon, Harrison, & Roesch, 2012), where the concept of 'dual harm' has gained greater traction within the literature (Slade, 2018). It is considered that those that engage in harm directed towards the self and others present as a unique group. The relationship between ACE and harm to others is, therefore, an important area to explore both as a separate relationship and one that may have some connection with harm towards the self.

ACE and harm to others

Adverse childhood experiences have been associated with offending behaviour, with individuals that have at least one ACE being significantly more likely to have a higher number of convictions than those that have none (Craig, Piquero, Farrington & Ttofi, 2017). Similarly, ACE have been associated with chronic delinquency (Stuewig & McCloskey, 2005) and increased likelihood of being arrested as a juvenile and adult (Widom, 1995; Widom & Maxfield, 2001). To some level it has been considered that an individual's attempt to detach from the distress of ACE, through dissociation and emotional numbing, may make it easier to cause harm to others (Kerig, Bennet, Thompson, & Becker, 2012; Vonderlin, Kleindienst, Alpers, Bohus, Lyssenko, & Schmahl, 2018). Although controversial, in that, not all those that are abused go on to abuse others, ACE have also been linked to various types of behaviours that could result in harm to others, such as aggression, intimate relationship violence, and sexually abusive behaviours.

Firstly, ACE have been associated with anger, poor anger management and physical violence (Gardner & Moore, 2008; Gluck, Knefel, & Lueger-Schuster, 2017, Gold, Wolan Sullivan, & Lewis, 2011). This link has also been established in a prospective study with ACE being predictive of violent behaviours for both males and females (Topitzes, Mersky, & Reynolds, 2012). This key study (Topitzes, et al., 2012) demonstrated strengths in its large sample size (n=1451) and methodology. For example, a longitudinal study accessing data from official records (e.g. juvenile court and child protective service records) and adult retrospective self-report. However, official records may underestimate both ACE

and offending behaviours and the findings were limited to a sample of individuals from minority ethnic backgrounds on low income and are therefore not generalizable. In addition, those that had committed sexual offences and used direct violence (e.g. weapon use, physical violence) in the commissioning of their crimes were also more likely to have been victims of abuse in childhood than those that did not use direct violence (Ramirez, Jeglic, & Calkins, 2015). Considering subtypes of ACE physical abuse, witnessing violence, emotional abuse having an absent parent/marital breakdown and neglect have all been linked with physical aggression towards others (Dutton & Hart, 1992; Lucas, Jernbro, Tindberg & Janson, 2016; Maschi, Bradley, & Morgen, 2008; Pournaghash-Tehrani, & Feizabdi, 2009; Theobald, Farrington, & Piquero, 2013; Widom, 1995). Research has however not always been consistent. For example, this association between ACE and anger/aggression has not always been found consistently across gender. Ashy and colleagues (Ashy, Yu, Gutowski, Samkavitz, & Malley-Morrison, 2017) found that whilst maternal and paternal psychological and physical abuse was associated with hostility in females, for males, only maternal psychological abuse was associated with hostility. Similarly, in another study physical abuse was associated with aggression, but only for females (Ellenbogen, Trocme, Wekerle, & McLeod, 2013). In addition, Widom and Maxfield (2001) found that only females had significantly more violent arrests than those without ACE, whilst males have a similar likelihood of violent arrest irrespective of whether they had ACE. It is also recognised that there is a more complex pathway between ACE and physical aggression towards others, as important mediators such as negative affect have been identified (Maschi, et al., 2008; Wolff & Baglivio, 2017). The causal pathways between ACE and physical aggression would benefit from being explored further.

Secondly, the link between ACE and violence within intimate personal relationships has also been explored. Those that have ACE are more likely to commit intimate partner violence than those that have no ACE in their history (Fang & Corso, 2007). Significant relationships between sexual abuse and intimate partner violence presented for males, whilst, only neglect presented for females (Fang & Corso, 2007). However, within other studies, the relationship between childhood sexual abuse and intimate relationship

violence was evidenced across gender (Kissee, 2012; Miller, Berslau, Chung, Green, McLaughlin, & Kessler, 2011). When exploring the relationship between exposure to violence in adolescence (e.g. being physically abused by parents or witnessing it within and outside the family home) and committing domestic violence, being the victim of physical abuse in childhood was the only predictor of domestic violence. However, this relationship was only found within the male sample, and not the female sample (Menard, Weiss, Franzese, & Covey, 2014). Other research that looked beyond physical abuse in childhood found that emotional abuse in childhood was linked to females perpetrating domestic violence (Gay, Harding, Jackson, Burns & Baker, 2013). Although a wealth of research has considered the link between ACE and harm inflicted on others within intimate relationships the evidence remains inconsistent. As with other factors, there appears to be a more indirect relationship between ACE and intimate personal violence with other factors mediating this relationship and highlighting why not all children who have had ACE go on to be violent in close relationships. For example, mediators such as disconnection and rejection have been found between ACE and intimate personal violence (Gay, et al., 2013). Further research explaining the pathways between ACE and intimate personal violence would be beneficial.

Thirdly, a number of large research projects have explored the link between ACE and sexually abusive behaviours. Although the main focus of research has been on testing the hypothesis that the sexually abused become the sexual abusers, a number of studies have also explored other types of ACE that link to engaging in sexually abusive behaviours in later life. Individuals that have been abused and neglected in childhood are considered at an increased risk of committing sexual crimes, however, this link has not always been specifically related to those that were sexually abused as children (Widom, 1995). In a number of connected studies conducted by Levenson and colleagues (Levenson & Grady, 2016; Levenson, Willis & Prescott, 2014; Levenson, Willis & Prescott, 2015) the link between ACE and sexual offending was explored. In a sample of over approximately 700 participants convicted for sexual offences, sexual violence (e.g. sexual offences where force and/or weapons were used or an injury was inflicted on the victim) was predicted by physical abuse, substance use in the family home, and having a family member in

custody (Levenson & Grady, 2016). The latter two ACE are likely reflective of an emotionally and physically absent parent, albeit with differing contexts. It was however noted that ACE a more prevalent in general offending samples than sexual offending samples and there was no relationship between childhood sexual abuse and sexual offending (Levenson & Grady, 2016). In another of Levenson and colleague's (Levenson, Willis, & Prescott, 2015) studies exploring the same data from an alternative perspective, it was found that males that had committed sexual offences were significantly more likely to have had ACE, including sexual abuse, physical abuse, and emotional neglect than those in the general population. Similar findings presented in the small sample of females that had committed sexual offences, with females that had committed sexual offences being more likely to have ACE, including sexual abuse, verbal abuse, and emotional neglect than the general population (Levenson, Willis, & Prescott, 2014). Despite this not being a consistent finding, and appearing to be influenced by the research approach taken (e.g. Levenson and colleagues exploring the same data set), other studies have linked sexual abuse in childhood to sexual offending (Dudeck, Spitzer, Stopsack, Freyberger & Barnow, 2007; Dutton & Hart, 1992).

An alternative perspective has considered whether early experiences of abuse are associated with a sexual preference for children. From this perspective sexual abuse and emotional abuse in childhood were associated with a sexual preference for children, which is a risk factor for contact and non-contact sexual offences against children (Alonko, Schmidt, Neutze, Bergen, Santtila, & Osterheider, 2017). Within this study, with a large sample of male participants, it was also reported that there was an over-representation of experiences of childhood sexual abuse in the group that had committed sexual offences when compared to a control group of individuals that had not committed offences. Similarly, sexual deviance, which was defined as encompassing offences against prepubescent children, strangers, males and having multiple victims, was associated with childhood sexual abuse and emotional neglect (Levenson & Grady, 2016).

Despite the findings presented by Levenson and others, these findings have not been mirrored in other studies. In a prospective longitudinal birth cohort study with a large sample of males who had a reported history of abuse or at least one offence, there was no link between sexual abuse in childhood and sexual offending, and in fact only a very small number (4%) of those that were sexually abused in childhood went on to sexually offend (Leach, Stewart, Smallbone, 2016). Similarly, a small-scale study that explored the impact on males who were victims of ACE within religious institutions found that only a small percentage (5.5%) of the sample went on to commit sexual offences (Wolfe, Francis, & Straatman, 2006). Two-thirds reported a history of sexual problems and a quarter reported a history of confusion with regard to their sexuality, however, hyposexuality was reported as being far more common than hypersexuality (Wolfe, et al., 2006). Although direct links have not been consistently established, there have been links between childhood sexual abuse and later risky sexual behaviours. For example, sexual abuse and physical neglect were associated with risky sexual behaviours and sex trafficking-based offences (Naramore, Bright, Epps, & Hardt, 2015) and sexual abuse has been linked to sexually coercive behaviours in adulthood (Langton, Murad, & Humbert, 2015).

Finally, similar findings in relation to the cumulative effect of ACE has also been found in the relationship between ACE and harm to others. Exposure to multiple ACE are significantly associated with offending, including sexual, violent and chronic offending (Baglivio, Wolff, Piquero, & Epps, 2015; Fox, Perez, Cass, Baglivio & Epps, 2015; Leach, et al., 2017; Maschi, et al., 2008). A key study (Fox, et al, 2015) accessed ACE and offending data from 22575 "delinquent youths" and compared those with chronic serious violent offending and those with single non-violent offending. They found that each additional ACE increased the risk of an individual engaging in chronic and serious violent offending by 35 years of age. The study found that those with two ACEs were 70% more likely to commit chronic serious violence than those with a single non-violent conviction and 200% more likely if they had six or more ACEs. The study sample size and access to official records are strengths of this study. However, data were collected retrospectively, used a sample of participants that had received one non-violent conviction as a comparator group rather than a sample with no convictions and the findings do not evidence causality.

Overall, it is recognised that despite there being some evidence of a relationship between ACE and future harm to others, not all children who have ACE are at an increased risk of engaging in harmful behaviours. Additionally, the research highlights that there is likely a more complex relationship between the two variables. Gaining a greater understanding of what other factors may influence this relationship would be valuable. One such factor that has been found to be related to ACE, and has the potential to influence behaviours that cause harm to the self and others, is shame. It also has some similarities to the other mediators identified such as negative affect, self-criticism and feelings of disconnection and rejection. Therefore, examining the relationship between ACE and shame will be valuable. Shame, however, is a complex multifaceted concept that needs to be understood in greater depth to fully explore it as a potential mediator between ACE and later harm to self and others. Therefore, how our understanding of shame has developed over time, its complex nature and current integrated conceptualisation of shame will be presented in detail. Following this, shame and its relationship with harm to self and others will also be considered in order to establish how shame may present as a mediator in the relationship between ACE and harm.

Shame

Theoretical background

The exploration of shame is far from a new phenomenon. It is considered that Confucius (born: 551 BC; died: 479 BC) and Aristotle (born: 384 BC; died: 322 BC) examined shame within human and societal functioning. The Confucian theory postulates that the 'harmonic realization of value, that is required for human flourishing, necessarily involves heightened sensitivity to shame' (Barrett, 2015, p. 142) and similarly, suggests that 'shame should be the negative image of ideal harmony' (Barrett, 2015, p. 157). Aristotle defined shame as a painful experience, socially connected, and not necessarily something that occurs only immediately after an event but also retrospectively, or prospectively (Higgins, 2015). Aristotle considered shame to be a sensitivity to the values and opinions

of others (Harris, 2014) and like Confucius, considers shame as being positive and a 'praiseworthy disposition' (Harris, 2014).

In more recent times, Darwin's theory of evolution (1859, 1871, 1872) has provided an influential perspective on shame. Darwin observed the presence of emotions, including shame, within species (Darwin, 1872). Different emotions could be observed through different facial and postural signs (Lewis, 1992) and these were considered social signals that can be recognised across cultures (Herman, 2012). Darwin described shame in the same way as he did other emotions, on the basis of what he observed. Therefore, shame was defined as the when the 'head is averted or bent down with the eyes wavering or turned away' and blushing was considered the manifestation of shame (Lewis, 1992, p.22). Darwin's observations support the notion that shame is similarly present across the species, can present instinctively and has a role in communicating with others. In addition, Darwin includes a principle of 'antithesis', where life forms can present with bodily postures that are the opposite to what an individual is truly feeling due to repetition of behaviour becoming habit and inherited, even if useless (e.g. a cat arching their back mirroring a threat posture when actually wanting affection or shrugging shoulders during an apology). This principle of 'antithesis' interestingly also may provide some support to the notion that a person's external presentation may differ to their internal emotional experience, for example, presenting with aggression when they are actually experiencing shame on an affective level.

Despite early theories stating that shame is a beneficial emotion (e.g. for survival of the self, the community and the species), shame has been linked with a number of negative conditions, such as self-harm (Xavier, et al., 2016), suicide (Wang, et al., 2017), violence (Tangney, et al., 2014), depression (Webb, Heisler, Call, Chickering, & Colburn, 2007), and psychosis (Wood & Irons, 2016), therefore demonstrating that shame can also be destructive. This suggests some conflict between early theories of shame & our current understanding of shame. It may be that these earlier theories are actually referring to guilt, or moral emotions more generally, rather than shame specifically; or that shame in

itself can have both a helpful and unhelpful impact. It could also be that dysfunction is linked with shame only when the level of shame is too high or cannot be switched off after a triggering event. As our understanding of shame has developed it would be expected that a more contemporary theory of shame and an increased conceptual understanding of shame would help to explain this conflict between shame as both a functional and dysfunctional emotion.

Following on from Darwin's evolutionary theory and in line with a greater understanding of human emotion, several other theoretical perspectives of shame were formed, which may further aid our understanding of the complex nature of shame. It is, however, difficult to summarise these clearly due to theoretical cross over and changing terminology. Others have attempted to summarise the overarching theoretical perspectives. For example, Gilbert (1998) indicated the following overarching theories of shame: psychoanalytical, affect theory, affect-cognitive, affect-behavioural, cognitive-behavioural, and developmental. Each defines shame from their own theoretical context, with early theories presenting from distinctly opposing standpoints. Nathanson (1992, p. 29) captured this perspective when reflecting on the increasing gap between theories and stated that the different perspectives were being *caricatured as "mindless" biology, "brainless" psychoanalysis, "unfeeling" cognitive theory and social psychology that ignores the internal'*. Reducing the gap between theories to help in our understanding of shame is vital. Positively, contemporary perspectives of shame recognise that shame is too complex to define from only one perspective when it appears it does, in fact, have aspects of affect, cognition, behaviour and interpersonal experience (e.g. Gilbert & Andrews, 1998; Tangney & Dearing, 2002). Additionally, a number of researchers have openly shared aspects of past theories that they have abandoned in response to new learning and shared their willingness to update theories in response to our increased understanding of this area (e.g. Nathanson, 1992; Lewis, 1987). The different theories of shame are reflected in this paper's integrated conceptualisation of shame. Each of these theories will be presented throughout this paper and conceptual difficulties will also be explored.

Before presenting the conceptual confusion around the definition of shame inherent within the literature, and in order to set the scene for this study, this paper takes a particular stance on the conceptualisation of shame. This will be briefly presented here with a more detailed presentation of this integrated model of shame provided later in this chapter. This paper considers shame from an integrated perspective, which postulates that there is learning to be gained from each theoretical perspective presented within this paper and therefore each has value in expanding our understanding of shame. This paper recognises that shame has an affective physiological experience at its core, with cognitive, relational, and behavioural aspects closely linked to the affective core. These elements are intertwined but in a fluid manner, in terms of an individual's phenomenological experience of shame and conscious awareness of the elements. This integrated model of shame, therefore, does not fully reject any of the theories presented in this paper. Instead, this paper acknowledges the strengths of each theory in line with the strengths of alternate theories in order to establish a robust, contemporary and integrated understanding of shame.

Establishing Clarity within a Tapestry of Conceptual Confusion

As well as differing theoretical perspectives of shame there have also been documented issues specifically in relation to identifying shame and then distinguishing it from other emotions (e.g. guilt, embarrassment). This conceptual confusion is unsurprising given that Retzinger (1995) found that there are over 100 vernacular words that may belong under the heading of shame (e.g. powerless, weak, inadequate, foolish, rejected, wounded, hurt, etc). Scheff (2015) also highlights how the broadening definitions of other emotions such as fear and anxiety (e.g. fear of rejection and social anxiety) can serve to disguise the presence of shame as well as the desire to mask shame.

Shame and Guilt

The most significant debate is in relation to the difference between shame and guilt, which have often been used interchangeably, particularly within past literature (Tangney & Dearing, 2002; Tibbetts, 2003; Makogon & Enikolopov, 2013). They are described as part of a family of self-conscious emotions (Tangney & Tracy, 2014) and tend to correlate with each other due to their similarity (Stuewig & McCloskey, 2005). Although there remains some debate, overall there has been increasing agreement from different standpoints of the distinction between these emotions with shame and guilt differing in their affective, cognitive, and behavioural dimensions (Lewis, 1971; Tangney & Dearing, 2002; Gilbert, 2010; Herman, 2012). In fact, several distinguishing features have been identified. For example, shame is considered to result in an individual placing negative emphasis on the self (I am a bad person) whilst guilt places negative emphasis on the behaviour (I did a bad thing) (Erikson, 1950; Lewis, 1971; Nathanson, 1992; Tangney & Dearing, 2002). Although both are considered painful emotions, shame is considered a more intense experience and one that impacts on an individual's core identity (DeYoung, 2015). Herman (2012, p.162) describes shame as a 'self-conscious state in which the self is "split", imaging the self in the eyes of the other'. This, in turn, can result in shame having a more destructive impact on interpersonal relationships (Tangney & Dearing, 2012). However, guilt is considered to involve a more unified sense of self (Herman, 2012) and a more reparative impact (Tangney & Dearing, 2002). This distinction is also mirrored in Herman's (2012) reflections on Lewis's (1987) differentiation between guilt and shame, in that they consider that shame is discharged by a shared connective moment (e.g. restored eye contact, shared laughter) and guilt is discharged in an act of reparation. Potentially as a reflection of the cognitive and relational differences in shame and guilt, shame is considered a more intense, distressing and painful affective experience (Lewis, 1971; Tangney, 1993; Tangney & Dearing, 2002). Additional evidence for the difference between shame and guilt comes from research that has demonstrated that shame and guilt have a different relationship with a range of psychological symptoms and diagnoses and therefore are conceptually different (Tangney, Wagner, & Gramzow, 1993; Dearing, Stuewig & Tangney, 2005; Kim, Thibodeau & Jorgensen, 2011). For example, shame but not guilt has been found to predict social anxiety and bulimia symptoms (Levinson, Byrne, & Rodebaugh, 2016)

Physiologically, there is evidence that although shame and guilt share some neural networks, they also activate different neural pathways within the brain. A systematic review of 21 studies that assessed the neural correlates of shame and guilt through functional and structural magnetic resonance imaging and positron emission tomography, found some common neural systems being activated. For example, the neural systems underlying emotional processing, self-referential processing and social cognition. They also found some common neural pathways that distinguished shame from guilt (Bastin, Harrison, Davey, Moll, & Whittle, 2016). For example, the neural pathways associated with relational memories and understanding the actions of others have been found with shame, whilst neural pathways linked to 'social pain' and mentalisation (e.g. interpreting behaviour of ourselves and others with an understanding of internal mental processes such as intention) were found with guilt. However, only a small number of studies focussed on shame or the distinction between shame and guilt specifically within this systematic review (n= 4) and the methods used to evoke the emotions were flawed (Bastin, et al., 2016). Despite the findings from this review, it is noted that our current understanding remains limited and any conclusions are therefore tentative. This type of research is still relatively in its infancy and therefore more research and replication studies need to be undertaken before we can be confident in these findings. Additionally, the measurement of emotions in this way is a heavily debated issue as there have been no definitively consistent findings across studies, suggesting emotions such as shame and guilt cannot be confidently distinguished based on neural activation alone (Barrett, 2006; Kassam, Markey, Cherkassky, Loewenstein, & Just, 2013). It is noted that despite its known limitations self-reported distinctions between emotions are still considered the 'gold standard' approach to identify emotions (Robinson & Clore, 2002).

Although shame and guilt appear distinct emotional experiences which differ on affective, cognitive and behavioural levels as well as activate differing neural pathways, they also share some commonality e.g. common neural pathways. It, therefore, may be that shame and guilt are within the same emotional domain but on either end of the spectrum. For example, guilt may be on the healthy end of the spectrum where responsibility is held for

engaging in an unhealthy behaviour and lessons are learned to take forward, reducing unhealthy behaviours being repeated and increasing engagement in reparative behaviours. The negative affective experience is a manageable level of social pain that allows for psychological growth. Shame, however, may fall on the opposite end of this spectrum where the individual is engulfed by responsibility, toxically damaging their identity and sense of self, creating intense levels of social pain and resulting in dysfunctional ways of managing it, for example, by attacking the self or finding ways to discharge the distress created by shame (e.g. bypassing shame, converting to anger etc). Therefore, the healthier response would be to let go of shame that is not warranted (e.g. being the victim of abuse) or convert it to guilt if it is (e.g. they decided to engage in a behaviour that had a negative impact on another). This hypothesised definition fits with the current literature, distinguishing the two emotions but recognising some commonality. Conceptual confusion is also seen between shame and other emotions, however, there has been less focus on the distinction between these versus shame and guilt.

Shame, embarrassment and humiliation

Despite recognition of the difference between shame and guilt, other emotions such as humiliation and embarrassment create further confusion as to their relationship with shame. Although there are some differences, humiliation and embarrassment are generally considered as variations within the shame experience (Miller, 1985; Lewis, 1987; Kaufman, 1989; Herman, 2012; DeYoung, 2015). The emotions considered part of the 'shame family' can be distinguished to some level in terms of their intensity, with embarrassment being considered lower in emotional intensity than shame (Elison & Harter, 2007). As well as the different labels being used to reflect variations in the intensity of affective experience (Elison & Harter, 2007) it is also recognised that there is a large vocabulary used to express feelings that may, in fact, be the same (Lewis, 1971; Retzinger, 1995, 1998). Similarly, unacknowledged, bypassed or converted shame can be given many different labels and hidden from both the individual experiencing it as well as those observing (Lewis 1971; Lewis 1992; Morrison, 1989; Nathanson, 1992; Retzinger, 1998). Thus, according to this evidence, several claims can be made. Firstly, shame can be

'unacknowledged' by consciously or unconsciously hiding it behind other terminology such as feeling uncomfortable, anxious, awkward etc. Not acknowledging shame likely serves the function of avoiding connection to the painful affective experience but also avoids the shame attached with disclosing shame (e.g. shamed by shame). Shame can be 'bypassed' by using strategies such as rapidly talking away the emotion and avoiding staying in the moment and connecting to the affective experience of shame. Shame can also be 'converted' directly into another emotion, for example, converting the internal emotional pain into anger and directing the distress outwards. Similarly, intense emotions such as shame can lead to dissociation (e.g. feeling nothing/numb) or overcompensation strategies such as attempting to convince others, and themselves, that they are in fact confident and happy rather than shamed.

There is disagreement within the literature as to the definitions of shame and humiliation, with some identifying them as the same emotion, some identifying them as two distinct emotions and others recognising an overlap between them. Similar to other researchers (Miller, 1985; Lewis, 1987; Kaufman, 1989; Herman, 2012; DeYoung, 2015) Tomkins (Sedgwick & Frank, 1995) considered shame and humiliation the same referring to them as the 'shame-humiliation' affect or affect auxiliary. Others have considered shame and humiliation to be distinct emotions. Elison and Harter (2007) describe humiliation as similar to shame, in terms of affective intensity, however, they state that shame occurs in a moral context where humiliation occurs in the context of being 'lowered in the eyes of others'. This distinction does not fit with our current understanding of shame given that a number of theoretical perspectives refer to shame as similarly being 'lowered in the eyes of others' and therefore does not present convincing evidence of shame and humiliation being distinct. Klein (1991) also distinguished the two emotions by describing shame as occurring when the individual believes they deserve their shame and humiliation occurring when they do not believe it is deserved. However, this proposed distinction between these two emotions suggests that all humans respond to shame in the same manner and any externalisation of shame would be labelled as humiliation, rather than recognising the multifaceted nature of shame. This also does not fit with research that has found positive correlations between shame and blaming others (Bear,

Uribe-Zarain, Manning, & Shiomi, 2009). This research suggests that an individual can experience shame even when they do not consider it valid by placing blame on someone or something else.

Gilbert (2018) proposes an alternative perspective and considers that shame and humiliation are overlapping emotions which also differ in distinct ways. Similarities included sensitivity to put down, desire to defend the self, increased arousal, rumination and there is a recognition that both are complex emotions (Gilbert, 2010; Gilbert, 2018). Differences reflected humiliation as outwardly focussed on the negative other and a sense of injustice, whereas, shame was considered internally focussed on the negative self and reflective of an acceptance of inferiority (Gilbert, 2018). It is, however, important to note that, similar to other proposed distinctions between these two emotions, the differences proposed in relation to humiliation can also be clearly linked with shame. For example, Nathanson's Compass of Shame model indicates that shame can involve directing blame externally by attacking others and research links shame with blaming others and with anger directed towards others (Bear, et al., 2009; Nathanson, 1992; Tangney & Dearing, 2002). In addition, there is a link between shame and narcissism e.g. with an individual not acknowledging shame by creating a narcissistic mask of defence and therefore being able to consider any suggested flaws as unjust (Wurmser, 1987; Lewis, 1987, Kinston, 1987; Morrison, 1989; Lewis, 1992; DeYoung, 2015). Gilbert (2018) appears aware of this to some degree as he highlights a much higher level of similarity when comparing humiliation to what he defines as externalised shame (e.g. shame stemming from being focussed on others seeing them in a negative light) as opposed to internalised shame (e.g. self-devaluation). The conflict between these perspectives indicates continued difficulties with the definitional distinctions currently proposed.

This paper considers shame as an emotion that can result in a range of behavioural responses, including attacking the other (Nathanson, 1992; Elison, Lennon, Pulos, 2006) and therefore currently considers humiliation, as commonly described by others, as a variation of shame (Miller, 1985; Lewis, 1987; Kaufman, 1989; Herman, 2012; DeYoung, 2015). This fits with the compass of shame model's understanding of shame (Nathanson, 1992; Elison et al, 2006) and Gilbert's (2018) recognition that aggressive behaviour itself

cannot distinguish shame from humiliation, as anger can also be a defence against shame. At this current time, there is no clear way to distinguish the two, if they are in fact distinct emotions. It is likely that the debate as to whether shame and humiliation are distinct emotions or not will continue and this reflects the need for further research and understanding (Elison & Harter, 2006; Gilbert, 2018). This paper takes its stance on humiliation as a variation of shame with reflection on clinical practice and research in the field. See the behavioural dimension of shame paragraph for further discussion on this controversial issue. Other terms that are often used interchangeably with shame, such as self-criticism, also create further conceptual confusion.

Shame, self-criticism, stigma, and self-blame

Additional aspects of conceptual confusion are reflected within the cognitive aspect of shame, which produces a number of conceptual conflicts. For example, self-criticism, stigma, self-stigma and self-blame are terms often used interchangeably with shame. Stigma is generally distinguished from shame by being considered as the social context overarching the personal experiences of shame (Gilbert & Irons, 2009) or as the 'public' and 'social' aspect of shame, where others consider an individual to have deviated from societal norms (Lewis, 1992). Lewis (1992) also indicates that stigma can be 'contagious' in that others that associate with the person 'marked' with this stigma may also be stigmatised by the public e.g. 'courtesy stigma' (Goffman, 1963). The notion that stigma reflects the judgement from society, that a person may or may not internalise, highlights the link between stigma and shame but also highlights distinct differences. Where the distinction blurs further, is when using the term 'self-stigma', which appears to represent the internalisation of the societal stigma and therefore more closely links with shame. However, Luoma and Platt (2015) distinguish between shame and self-stigma by referring to shame as the 'emotional core' of stigma and self-stigma as the 'internalisation of a socially devalued status'. Self-stigma also seems similar to self-criticism and self-blame. Gilbert (1998) defines self-criticism as internalising the negative judgements and criticism of others and in turn devaluing the self with these self-critical thoughts. Although self-criticism and self-blaming appear intertwined, Gilbert (1998) considers them 'close allies' but different because individuals may have self-critical thoughts without attributing

blame to themselves (e.g. self-blaming) and similarly an individual may feel shame in the absence of self-blaming (e.g. a genetic characteristic) (Shaver & Drown 1986; Driscoll, 1988). Despite some lack of clarity, it appears that these terms reflect the cognitive element of shame and therefore should not be used interchangeably with shame without recognition of the other dimensions of shame (e.g. affective, behavioural etc). However, the significance of these cognitive aspects of shame should not be undervalued within the whole shame process e.g. as one of the dimensions of shame. These cognitions (e.g. self-critical thoughts) are considered to be highly fused with affective experiences of shame (Gilbert & Irons, 2009). For example, self-criticism (e.g. hated self and inadequate self) and shame have been found to 'mutually enhance' one another and both are similarly associated with psychopathological symptoms (Castilho, Pinto-Gouveia, & Duarte, 2017). As discussed in greater detail later in this review, shame can intertwine with self-critical thoughts but shame can also be experienced in the absence of conscious thoughts, or before developing a thought as a way to gain an understanding of the affective experience.

Self-criticism has been understood not simply as a shame process, but as an independent phenomenon with wider forms and functions. For example, considering self-criticism as solely a cognitive aspect of shame can result in the various forms and functions of self-criticism being missed or misunderstood. Similar to shame, self-criticism is also considered as a multidimensional concept that has previously been inappropriately considered in a unidimensional manner (Baiao, Gilbert, McEwan, & Carvalho, 2015). Self-criticism is considered to have both a positive as well as a negative function and form. Self-criticism can be in the form of self-persecution or self-correction (Gilbert, Clark, Hempel, Miles, & Irons, 2004). For example, the tone of voice, the vocabulary used and the function of the self-criticism can potentially influence whether it has a positive or negative impact on the individual. The negative form of self-criticism has also been considered to present in two ways, either as "hated self" (e.g. in the form of a desire to hurt or persecute the self) or "inadequate self" (e.g. in the form of a focus on their own sense of personal inadequacy) (Baiao, et al., 2015). It is likely that the 'hated self' and 'inadequate self' forms of self-criticism are more closely linked with the cognitive element

of shame (Castilho, et al., 2017), whereas, self-corrective forms of self-criticism are not. Instead self-corrective and self-reassuring approaches may be more closely linked with forms of self-compassion when faced with negative events in life.

Measuring Shame: A Complex Task

Measuring shame becomes a complex task when reflecting on the various theoretical perspectives, the different dimensions of shame (e.g. affect, cognition, etc) and the difficulties distinguishing between shame and other emotions or variants of shame. Each measurement of shame currently used within the literature appears to be grounded more dominantly within one dimension of shame. For example, the Experience of Shame Scale (ESS) (Andrews, Qian, & Valentine, 2002) is focussed the emotional experience of shame and the Test of Self Conscious Affect (TOSCA) (Tangney, Dearing, Wagner, & Gramzow, 2000), although described as a measure of emotion, has a more dominant focus on shame as a cognition (DeYoung, 2015). It is difficult to be confident that a measure that only captures one dimension of shame is accurately assessing shame, particularly with those that are solely affective or cognitive measures. For example, an individual who is cognitively and affectively insightful and reflective would likely be captured by both measures, whilst an individual who has not attached a cognitive meaning to a shame-based affective experience, due to limited insight and reflection, may only be captured by one measure. Further to the theoretical and conceptual issues, there is also the recognition that shame may not be identified, acknowledged or disclosed by an individual being assessed (Lewis, 1971; Lewis, 1992; Wurmser, 1987; MacDonald, 1998). Therefore, shame may be present, but the individual will not respond in a manner to indicate this. They may also avoid situations that trigger shame (Barrett, 1995; Young, Klosko, & Weishaar, 2003), dissociate from the painful experience of it (Dutra, Callahan, Forman, Mendelsohn, & Herman, 2008; DeYoung, 2015), convert it into another more manageable emotion, such as anger (Lewis, 1971; Retzinger, 1998; Tangney & Dearing, 2002; Tracy & Robins, 2003), or use a narcissistic defence against it (Morrison, 1989; Nathanson, 1992). Additionally, Herman (2012, p. 163) highlights "a characteristic of shame is that it can feed upon itself. The shamed person feels ashamed of feeling ashamed" and therefore may be too ashamed to admit feelings of shame. To ensure that shame is assessed with greater

accuracy, it is important that the measurement of it is grounded in its clear and robust conceptualisation. Conceptualising shame from an integrated approach, that reflects our current understanding of this multifaceted emotion, is vital.

Conceptualising Shame: An Integrated Approach.

As reflected in the range of theoretical perspectives finding a consistent definition of shame is difficult (Gilbert, 1998) and one that will likely continue to be debated whilst research continues to add to our knowledge of shame. In part, it is wondered whether the language used to describe shame from each theoretical perspective can indicate differences in definition when in fact the underlying meaning represents some similarity. It is acknowledged that due to the complexity of shame it can present externally in different ways and it can exist in the individual with or without their full conscious awareness of it as an actual shame-based experience (Lewis, 1971; Nathanson, 1987; Macdonald, 1998). However, this research acknowledges the different theoretical perspectives of shame and postulates an integrated approach to shame. This integrated conceptualisation of shame recognises that shame is a self-conscious emotion (Tangney & Dearing, 2002) that encompasses an affective element, a cognitive element, a relational element, and a behavioural element. Shame is an unpleasant aversive emotional experience (Nathanson, 1987), where potential cognitive thoughts may be negatively focussed on the self (Lewis, 1971; Lewis, 1992; Young, 1994; Tracy & Robins, 2004) and/or the negative evaluation of the self in a relational context (Gilbert & Andrews, 1998; DeYoung, 2015) which in turn results in shame informed behavioural responses (Nathanson, 1992; Morrison, 1989).

This integrated conceptualisation of shame recognises that each theory brings something of value to our understanding of shame. The integrated conceptualisation of shame refers to shame as encompassing a complex intertwined combination of elements with the affective experience at its core. Each aspect of this integrated approach to shame is summarised, with shame being a layered experience a key aspect of this approach (see figure 2.1).

Figure 2.1: An Integrated Approach to Shame
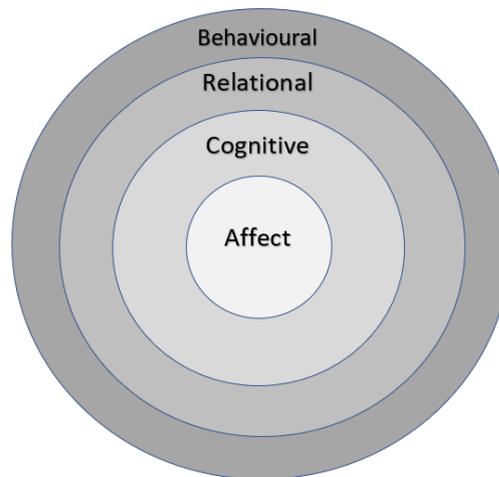
Shame's affective element

The terms 'emotion' and 'affect' are often used interchangeably, however, they refer to two different aspects of the emotional experience. 'Affect' is focused on the biological physiological experience whilst 'emotion' is the overarching combination of affect, cognition, and behaviour (Nathanson, 1992). In fact, Nathanson (1992) refers to 'affect as the biology and emotion the biography'. Therefore, this section refers solely to the affect element of shame in terms of a physiological experience whereas the emotion of shame is encapsulated in the integrated elements combined (e.g. affect, cognitive, relational, behavioural). As an affective physiological experience shame has been described from self-report as a hyper-physiological state including sweating, blushing, gaze aversion and lack of coordination and cognition (Schore, 2003, p.154) as well as a sense of 'shrinking' (Tangney & Dearing, 2002). In fact, research into neuroendocrinology has provided further support for the physiological element of shame. For example, a meta-analytic review of a large number of laboratory-based studies found socially evaluative and shaming conditions consistently resulted in significantly elevated levels of cortisol, which is required to initiate threat responses (e.g. fight, flight) (Dickerson & Kemeny, 2004). In general, theorists tend to agree that shame has an affective physiological element. However, debate tends to centre around two specific issues. Firstly, whether shame is an

innate primary affect or a secondary affect that is learned, and secondly, whether the affective element of shame can exist in the absence of the cognitive element. However, both issues have some level of crossover and therefore this is reflected in the differing perspectives presented here.

Affect theorist, Tomkins (1967), described shame as an urgent "inborn and predetermined mechanism" and later established shame as an affect auxiliary, where it functions to interrupt positive affect (Tomkins, 1987). Nathanson (1992, p.138) clarified that "shame is an auxiliary to the positive affects, rather than a true innate affect" but adds that shame still "bears all the properties of the other affects". For ease of reference, it is important to highlight that the terms 'innate' and 'primary' are used interchangeably within the literature but refer to the same notion that affective experience is a primitive automatic response to external stimuli. Suggesting shame as an innate/primary affect indicates that it can trigger automatically when a threat is perceived and without the mediation of cognitive evaluation (Czub, 2013). Support for this perspective presents in a number of studies. For example, research has indicated that our brains receive information that links affect to bodily responses without the involvement of conscious awareness and that affective processes are 'primarily non-conscious' (Siegal, 2012). Additionally, affective and cognitive memories have been found to activate different neural pathways (LeDeux, 1998) and therefore affect is considered as able to exist before cognitive thoughts as well as without cognitive thoughts (LeDoux, 1998; Sippel & Marshall, 2011; Zajonc, 1984).

Despite this theory of shame, contemporary theorists, whilst recognising the affective physiological element of shame, do not lend support to shame as an innate affect. Much of the debate here crosses over into whether shame can be triggered in the absence of cognition, with innate primary affects seen as a non-cognitive 'hard-wired' process. Shame theorists from a cognitive perspective assert that these primitive 'physiological infrastructures' only developed into self-conscious emotions, such as shame, with the evolution of complex cognitive abilities, such as self-reflection and self-identity (Gilbert,

2018). Despite the notion of shame as a primary affect receiving criticism, there remains possible evidence for both perspectives. For example, there is recognition that there is a connection between primary affects and shame because the same system (e.g. Amygdala, Autonomic Nervous System etc) that detects threat remains the same despite humans developing complex cognitive capabilities (Dickerson & Kemeny, 2004; Gilbert, 2018). Gilbert (2018) expands on this stating that shame likely uses primary affects as building blocks to develop the emotional experience we refer to as shame. It has also been postulated that shame could present as both a primary and secondary affect, with the first occurring as an immediate 'hard-wired' response to a threat and the latter being evoked in response to cognitive appraisal of the event and associated schemas (Lee, Scragg, Tuner, 2001). Another perspective recognises the interplay between affect and cognition. In line with epigenetic[1] theory and neuroplasticity, it is postulated that due to cognitive-behavioural learning experiences, such as those within abusive childhoods, individuals may develop faster neural pathways between stimuli and affective experience that bypass cognition (thoughts and processes) and act in a similar manner to primary affects. Therefore, the 'pseudo primary affect' experience triggers in the absence of cognition but cognition may have played a part in the development of the neural pathways. This proposition reflects within the research that has found links between childhood maltreatment and biological changes seen within cortisol levels, brain imaging, and other biomarkers (e.g. epigenetic and DNA Methylation) (Bearer, et al., 2015).

Irrespective as to whether shame is a primary or secondary affect or what theoretical perspective shame is considered from there is agreement and clear evidence that shame has a physiological grounding that results in an affective experience for an individual. Therefore, the affective element is an important aspect of shame and is recognised across theoretical perspectives as being at the core of shame (Luoma & Platt, 2015). Although shame may be able to exist in the absence of cognitive thought (LeDoux, 1998; Sippel & Marshall, 2011; Zajonc, 1984) or the presence of the other (Lewis, 1992), an affective element is a necessary element of shame. This is maintained irrespective of whether an

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[1] Epigenetics state that although we inherit our genes from our parents the environment, we grow up within can change how these genes are expressed (e.g. switching them on or off) (Carey, 2011).

individual is not conscious of the affect, acknowledges their affect, is connected to their affect (e.g. dissociation, avoidance), or has converted it to another emotion, some physiological reaction will always present. It is expected that with further neuropsychological and epigenetic research our understanding of the affective element of shame will strengthen. As initially highlighted a more debated perspective comes from shame's cognitive element.

Shame's cognitive element

When reviewing the literature into the cognitive element of shame, there is evidence of conceptual imprecision. References to cognitive processes and cognitive thoughts are often used interchangeably under the overarching term cognition. This can sometimes cause confusion with regards to whether shame involves conscious cognitive thought/appraisal (one aspect of cognition) or the involvement of cognitive processes, of which there are many (e.g. attention, perception, memory, language, learning and higher reasoning). In order to help create greater clarity the terms 'cognitive thoughts' and 'cognitive processes' will be used separately. The former refers to the 'slower' neural pathway where there will be a conscious awareness of cognitive thought. The latter refers to the 'faster' neural pathway where underlying cognitive processes occur without conscious cognitive thought (e.g. experiencing the affect without a conscious cognitive thought attached). The term 'cognition' will refer to all the aspects of cognition, including the different processing systems and conscious thoughts. It is noted that some areas of debate centre around all emotions, however, the focus here will be on discussing these issues in relation to shame.

From a cognitive processing perspective, it is the information processing systems appraising a given situation which determines the emotion that is experienced and therefore shame is considered a cognitive process (Lazarus, 1991). However, others note that there are other 'non-cognitive biological information processing systems' and therefore this is an inaccurate assumption (Izard, 1992). This debate has continued as to whether cognitive processes are required when processing emotion with some asserting

emotional processing is automatic (Vuilleumier, Armony, Driver, & Dolan, 2001) and others that emotional processing is dependent on cognitive processes (Pessoa, McKenna, Gutierrez, & Ungerleider, 2002). The latter point reflects the notion that self-conscious emotions require complex cognitive abilities (Lewis, 1992; Gilbert 2018 etc) and that without cognitive appraisal all stimuli would be evaluated as equally important (Siegal, 2012). This is a similar debate to the notion of shame as a primary or secondary affect and it may be that both perspectives have some value in that it is possible both standpoints are true. For example, affective processing and cognitive processing are considered distinct but when complex behaviours are involved reciprocal interactions between the two systems are required (Dolcos, Iordan & Dolcos, 2011). It may be complex affects such as shame are possible, in part, through the 'representation of the experience in a cognitive workplace' (LeDeux, 2012) even if those cognitive processes are not in an individual's conscious awareness e.g. shame in the absence of a cognitive thought. This complexity also presents within shame's relationship with memory. Shame likely originates from, and is grounded within, past trauma memories (Matos & Pinto-Gouveia, 2010) demonstrating a link between shame and memory as a cognitive process. However, shame has also been found to significantly impair working memory, another related cognitive process (Cavalera, et al., 2018). This reflects clinical representations in Post Traumatic Stress Disorder (PTSD), in that PTSD is grounded in a past traumatic memory, but when the threat system triggers the amygdala the pre-frontal cortex goes "offline" (e.g. the brain focuses attention on surviving the threat leaving other abilities side-lined until the threat reduces), which then results in complex cognitive thought not being accessible until the threat has reduced (Shin, Rauch, Pitman, 2006). In line with this, it is also hypothesised that threat-related attentional bias, found in anxiety (Bar-Haim, Lamy, Pergamin, Bakermans-Kranenburg, & van IJzendoorn, 2007), likely presents in shame.

Cognition likely plays some part in shame, most likely through cognitive processes, but it is also recognised from a neuropsychological perspective that shame can be experienced in the absence of any conscious cognitive thoughts (LeDoux, 1998; Sippel & Marshall, 2011; Zajonc, 1984). Cognition also has a role in controlling affect (Ochsner & Gross, 2005) or maintaining rumination and therefore intensifying affect (Gilbert, 2010). Conversely,

affect can have both impairing and enhancing effects on cognition as well as 'immediate and long-term effects on lower level (e.g. perceptual) and higher level (e.g. mnemonic) cognitive processes' (Dolcos et al, 2011, p.686). Therefore, although 'affective' and 'cognitive' systems are separate they do have a reciprocal relationship, so although potentially not necessary, it is likely that a cognitive element presents within shame at some point within the phenomenological experience of shame. For example, there is a 'cognitive phase' of shame (Nathanson, 1992), whether this is triggering the affective experience, providing a cognitive workplace for the affective experience, or as a way to understand the affective experience of shame. It is however not considered to be the core of shame given that affective elements of shame can present in the absence of conscious cognitive thought (LeDoux, 1998; Sippel & Marshall, 2011; Zajonc, 1984). As a number of key measures of shame are heavily focussed on an individual being aware of their shame experience and a cognitive thought being attached to that experience it raises concern as to whether previous research using these measures may have a greater chance of false negatives. Despite this, accessing cognitive thoughts can potentially be the closest researchers can currently get to evaluating an individual's phenomenological experience of shame. Although there is some conflict in relation to the cognitive element of shame it is possible that another element of shame, namely the relational aspect of shame, acts as a higher order conduit between the affective element of shame and the cognitive element of shame.

Shame's relational element

Previously this element of shame could have been referred to as 'in the eyes of the other' element of shame. It, however, would have considered shame as purely occurring in the presence of an 'other person', which would be an oversimplification of shame. This, in turn, can lead to the more complex nature of this element of shame being misunderstood. For example, shame can be suggested to only occur in the presence of another and therefore the notion of 'self' and the 'other' is taken only in its literal sense. In this context 'self' refers to an individual's sense of who they are, as distinct from other beings, and with their own separate internal world. It is however recognised the shame can occur with reflection on how we are perceived by an 'other' but also when in isolation reflecting on

the self without specific consideration of an actual 'other'. Gilbert (1998) has previously acknowledged this distinction by referring to shame that is in the absence of another person as 'internal shame' and shame in the presence of another 'external shame' (N.B. these terms are used differently to Gilbert's distinctions within the rest of the paper)[2]. This captured a more accurate phenomenological understanding of shame, however, does not fully reflect its complex nuances. This more nuanced understanding of shame is instead captured when recognising shame as 'relational'. That is, that shame involves an understanding of the 'self' only relative to another 'object'. Object, in this sense, refers to literally an 'other' person or an 'other' concept of self. For example, shame can occur in the 'actual self' to 'other observer self' internal dialogue. This can present in self-critical thoughts where the 'observer self' berates the 'actual self' for not meeting the standards/expectations of the 'observer self' and occurs in absence of an external person's perspective. Both these perspectives are captured more accurately by conceptualising this aspect of shame as the 'relational element' of shame. Another key point within this element, however, relates to where these dialogues and perceptions of the 'observer self' originate. This is where other theories, such as developmental theories provide some further understanding. For example, recognising that the self-dialogue may have been internalised from observations of, and interactions with, 'actual others' during the child's development. Therefore, it is considered that bringing together affective and cognitive elements and placing these within a relational context provides another important element of shame. Theoretical perspectives representing the relational aspect of shame are presented. Each theoretical perspective sheds light both on the relational nature of shame and highlights the importance of relational perspectives in understanding the origins of shame.

Shame is considered to have a relational element (DeYoung, 2015; Ogden & Fisher, 2015) and this reflects the importance of the 'self' within the concept of shame and how our view of the 'self' can be impacted by the 'other'. This relational aspect of shame presents on two levels. Firstly, it can present on an external level with others considered the direct

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[2] This paper considers 'internal shame' as shame related distress that is directed inwards (e.g. internalised) and 'external shame' is shame related distress pushed outwards (e.g. externalised).

source of the shame (Sznycera, Tooby, Cosmides, Porat, Shalvi, & Halperin, 2016). For example, 'shame arises from the perception of negative judgements about the self in the mind of others' (Matos, Pinto-Gouveia, Gilbert, Duarte & Figueiredo, 2015, p. 6). This can be an accurate assessment of 'disdain in the eyes of the other' (Cooley, 1998; Matos, et al., 2015) or a sense of feeling 'exposed' as though others are directly looking at what the individual considers to be their own flaws (Lewis, 1992) whether the other person thinks this or not. This sense of comparing the self against the other is reflected in research that found the more an individual compares the self against others (e.g. social rank) the higher levels of shame experienced (Cheung, Gilbert & Irons, 2004). Secondly, shame can present on an internalised level. That is relational shame that exists in the absence of an 'obvious other'. With our ability to self-reflect and self-monitor we develop a sense of our own internalised idea of self and reflect on whether this meets the notion of who we want to be. Shame can reflect the discrepancy that is felt between what an individual considers the 'ideal self' and their 'real self' (Higgins, 1987; Higgins, Klein, & Strauman, 1985). From a self-psychology perspective, DeYoung (2015, p.18) refers to shame, as 'the experience of one's felt sense of self disintegrating'. Given a coherent sense of self is vital for psychological well-being, any disintegration of this can lead to 'psychological annihilation' (DeYoung, 2015) whether this stems from incongruence in the 'self to other' based sense of self or the 'self to self' dialogue.

The origins of shame within this relational element have been considered from different perspectives. A key perspective is from object relations theory (Klein, 1932, 1957; Fairbairn, 1952), where shame, in the guise of a 'bad other object', is internalised as a self-protective survival strategy in childhood. Fairbairn (1952, p. 66) eloquently highlights this process in the following quote, "it is better to be a sinner in a world ruled by God than to live in a world ruled by the devil". If a child internalises the bad object (e.g. the blame belonging to the abusive parent) then they have some level of control (e.g. if they just stop being bad then all will be well) and they have hope that those with the power (e.g. the now god-like parents) will treat them fairly. If they do not internalise the bad object, they are left powerless, vulnerable and unable to stay safe. This child would likely grow up to view the self as 'the bad object' and engage with the self and the world around them

with this tainted view of themselves (e.g. shame-prone). Once "shame becomes internalised so that the self is now entirely capable of reproducing shame. Not only does the shame response itself become internalised, but internalisation spreads shame throughout the self. Shame becomes like a cancer, malignant" (Kaufman, 1989, pp. 55-56). The shame that then exists in the absence of the other will continue to be maintained within the self, as the self acts as both the shamer and the shamed.

Another perspective builds on object relations theory and reflects within attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969, 1973, 1980). Schore (2003) stated that shame is created when primary caregivers respond to a child's presence and desire to want to be with them with indifference or disapproval. If a child is ridiculed or rejected when they seek out comfort from a primary caregiver, they develop an internal working model of the other as rejecting and an internal working model of the self as unworthy (Schore, 1998). Early interpersonal experiences are considered to have a significant impact on self-identity and relational schemas and therefore provide a base for the development of shame (Badenoch, 2008; Cozolino, 2014; Hazan & Shaver, 1994; Kaufman, 1989, Young, et al., 2003). These theories are mirrored within research that found shame correlated with insecure attachment styles (Lopez, Gover, Leskela, Sauer, Schirmer, & Wyssman, 1997; Wei, Shaffer, Young, & Zakalik, 2005) as well as experiences of apathy, abandonment, rejection and indifference from caregivers (Claesson & Sohlberg, 2002).

The relational element of shame has support, both for its importance within the conceptualisation of shame and potentially the development of shame. It is, therefore, noted that the relational aspect of shame is a key element and one that may be equally held to the level of importance affective experience has in our understanding of shame. A final element of shame lies not in the internal world of experience but in how it is processed and outwardly presented within shame-fused behaviours.

Along with internal experiences of shame, there is a behavioural element which reflects the ways in which an individual's shame manifests in their externally observed behaviour. Various terminology is used in the literature to describe the behavioural manifestation of shame, such as coping styles, emotion regulation strategies, defences, responses etc (Elison, Garofalo & Velotti, 2014). Each of these terms makes assumptions regards the function of the behaviour. For the purpose of clarity, all these terms will be referred to within the umbrella term 'behaviour' or 'behavioural manifestations.' The importance of the behavioural element of shame, what it is and how it fits within the overall concept of shame as an emotion will be presented here. Additionally, like other emotions, shame may manifest behaviourally in different ways and therefore two models that represent how our internal world can present in the external world through behavioural manifestations of shame are presented, namely schema theory and the compass of shame framework.

Shame can often be defined by others in a way that suggests a person's internal experience is always matched by their external appearance. For example, suggesting that those who feel shame will lower their head and retreat. However, in the same way that fear can present externally in different ways, such as within the fight, flight, freeze or appease responses, shame can also present differently from an external perspective. Behaviours may represent various hard-wired approaches to reducing danger, which can include social threats. The external presentation of shame can also be impacted by an individual's conscious or unconscious emotion regulation strategies and therefore impact their behavioural response to experiencing shame (Elison, Lennon, & Pulos, 2006; Nathanson, 1992; Schoenleber & Berenbaum, 2011). It is, however, important to note that individuals may use more than one emotion regulation strategy, which may be influenced by other factors (e.g. mood, environment, etc) and this, in turn, can lead to different behavioural manifestations (English, Lee, John, & Gross, 2017; Heiy & Cheavens 2014).

The compass of shame (Nathanson, 1992), provides a framework in which to explore the behavioural manifestations of shame. This has similarities with the overcompensation, avoidance and surrender strategies referred to in schema therapy (Young, Klosko, & Weishaar, 2003). However, it provides a more in-depth understanding, with a specific focus on shame, breaking down the behavioural manifestations of shame into four rather than three categories. Behavioural manifestations of shame are characterised within four themes: withdrawal, avoidance, attack self and attack other. These are briefly described in table 2.1 and how these can behaviourally manifest is presented in figure 2.2 below.

Table 2.1: Four Dimensions of the Compass of Shame (Nathanson, 1992; Elison et al, 2006)

Dimension	Description
Attack self	Involves accepting their shame as valid and turning the focus of this shame inwards. It involves masochistic thoughts and behaviours and is considered a strategy of 'doing onto yourself what you fear others will do to you'.
Attack other	Involves an individual typically not accepting shame and pushing the distress of shame away and instead onto others, making the other person feel worse. This can be by directly blaming others or indirectly releasing their own distress in the form of verbal or physical aggression.
Withdrawal	A rapid withdrawal from the shaming situation, socially isolating oneself and hiding. They sense that the shame is valid and want to limit exposure of this shame so withdraw from shame exposing experiences.
Avoidance	A slow and deliberate movement away from shame. Distracting the self and others from the shame experience by denying the

shame experience as valid or present. Disavowing shame through distractions which are self-soothing, pleasurable, exciting, or numbing.

The Attack Self behavioural manifestations reflect research that focusses on the self-critical, self-blaming aspect of shame (Castilho, et al., 2017; Gilbert, et al., 2004; Gilbert and Irons 2009). Shame is also correlated with greater levels of pessimism (Lundberg, Kristenson, & Starrin, 2009), self-defeating personality traits (Friedman, 1999), and self-objectification (e.g. seeing the self as an object to be used by others) (Miner-Rubino, Twenge & Fredrickson, 2002). The Avoidance based behaviours focus on the avoidance of shame through self-soothing behaviours, distraction techniques and denial. For example, self-critics have been found to avoid situations that could result in failure and use avoidant strategies to avoid shame-based thoughts and feelings (Dunkley, Zuroff, & Blankstein, 2003). These strategies are reflected in the associations between shame and substance use and shame and denial of responsibility (Patock-Peckham, Canning, Leeman, 2018; Stuewig, Tangney, Kendall, Folk, Meyer, & Dearing, 2015; Dearing, Stuewig, & Tangney, 2005). Additionally, shame-prone individuals are more likely to engage in risky behaviours potentially as a way to avoid the painful affect of shame (Stuewig, Tangney, Kendall, Folk, Meyer, & Dearing, 2015). Withdrawal based behavioural manifestations involve a quicker retreat than avoidance strategies with the individual engaging in withdrawal behaviours to limit shameful exposure (Elison, Lennon, & Pulos, 2006). This withdrawal-based approach is mirrored in research that found self-critics were less connected to others, did not find interacting with others pleasurable (Zuroff, Moskowitz, & Cote, 1999) and perceived others to be critical of them and less supportive (Dunkley, et al., 2003). The Attack Other behavioural manifestations are reflected in research that has found greater levels of shame correlating with increased anger and rage (Hejdenberg & Andrews, 2011; Keene & Epps, 2016; Parks, 2002; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow 1996; Wright, Gudjonsson & Young, 2008) and increased blaming of others (Stuewig, Tangney, Heigel, Harty, & McCloskey, 2010). Similarly, this fits with the findings of research that has identified positive correlations between shame and narcissism (Keene & Epps, 2016; Morrison, 1989; Wurmser, 1987), and defensive

'splitting' (Gramzow & Tangney, 1992). It may also reflect what is referred as the 'false self' where an individual outwardly presents in a manner that is not congruent with their own internal world (Miller, 2008) and serves to keep shame hidden whilst maintaining an outward presentation of calmness (Harper & Hoopes, 1990). The Attack Other based behavioural manifestations are also an effective strategy at pushing away those that may leave an individual feeling exposed, if the other person withdraws out of fear they can't trigger, or see, the shamed individual's flaws. Each of these dimensions highlight that shame can present in different ways other than just the way focussed upon within previous research, which has used measures that tend to only capture the self-attack and withdrawal aspects of shame. The four-dimension approach seems to be more able to capture the complexity of shame.

Figure 2.2: Compass of Shame (Nathanson, 1992; Elison et al, 2006)
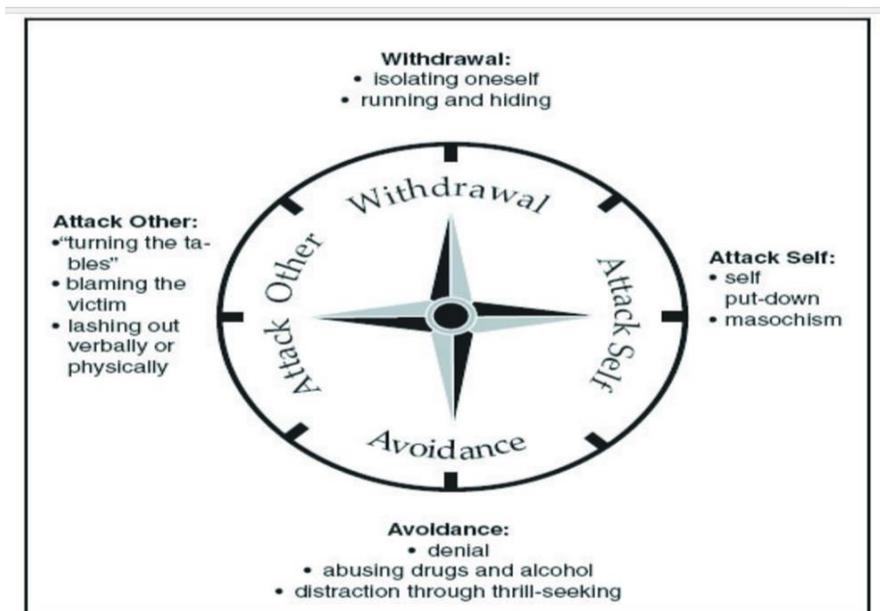
Given our greater understanding of shame as a multifaceted complex emotion, the compass of shame allows a framework in which shame can be explored in relation to later sequelae such as harm to self and others.

Shame, harm to others and harm to self

Consideration of the different elements of shame, and in particular the behavioural element of shame (e.g. compass of shame), highlights potential links between shame and both harm to the self and harm to others (see figure 2.3). A psychiatrist in clinical practice describes the link between shame and harm to self and others by observing that individuals would rather kill or destroy themselves than lose self-respect and be left feeling shamed (Gilligan, 1997). Both the links to self-harm and harm to others will be explored with regards to their relationship with shame. Each behavioural manifestation of shame is likely linked to self-harm, suicide and harm to others due to the role they each play in reducing the distress associated with shame by managing shame in one of four maladaptive ways (e.g. attack self, attack other, withdraw, avoid). Nathanson (1992) considered each dimension of shame to play a role in reducing, ignoring, or magnifying shame, without addressing its source. Each form of shame associated with later harm will likely have the function of reducing distress. Even magnifying shame allows some level of control over shame, such as the concept of internalising shame to reduce the level of external threat and further distress postulated within Fairbairn's (1952) analogy of it being better to be a devil in a world ruled by God. However, it is also recognised that these harming behaviours (e.g. towards self and others) originated from shame may also create a reinforcing loop, with the harming behaviours creating further shame and need to reduce it and then the cycle continues. How shame may connect with self-harm, suicide and harm to others will be explored in greater depth.

Figure 2.3: Integrated Conceptualisation of Shame and Compass of Shame Combined
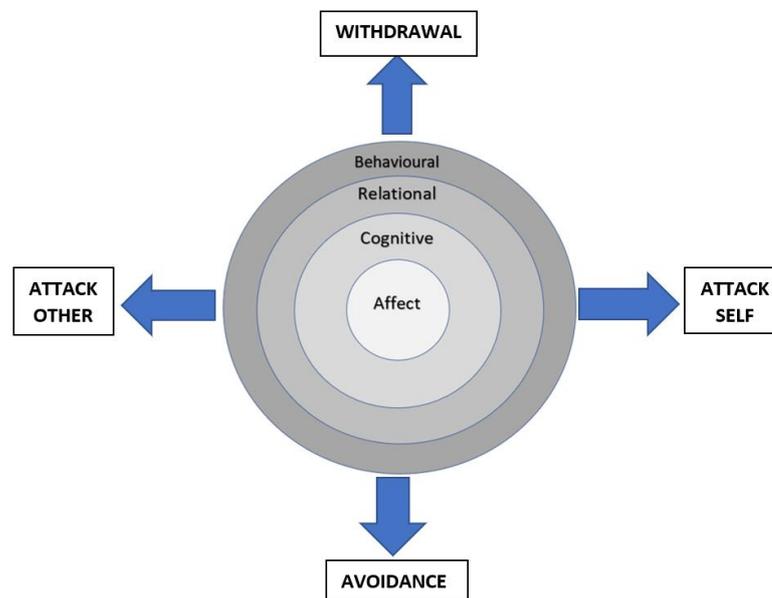
Shame: Self-harm and suicide

There are various ways in which this relationship between shame and self-harm may manifest. For example, through attacking the self, avoidance, attack other or withdrawal. Attacking the self appears to link more directly to self-harming behaviours with individuals deliberately inflicting punishment on a self they see no value in and deserves to be hurt and/or punished (Dyer, Dorahy, Shannon, & Corry, 2013; Gilbert, et al., 2010; Klonsky, 2007). Alternatively, avoidance based self-soothing and distraction strategies could also link to harm inflicted on the self. This could be a directly applied strategy to soothe the distress caused by shame (Gilbert, et al., 2010; Milligan & Andrews, 2005; Gratz, 2003; Haines, Williams, Brain, & Wilson, 1995; Schoenleber, Berenbaum, & Motl, 2014; VanDerhei, Rojahn, Stuewig, & McKnight, 2015), as well as being used as a way to manage emotion dysregulation (Klonsky, 2009). It could also provide a distraction from the affective distress experienced with shame, with those who are aversive to negative affect at greater risk of self-harming behaviours (Schoenleber, et al., 2014), or as a way to distract from unhealthy negative cognitions (e.g. self-criticism) (Najmi, Wegner, & Nock, 2007). Another consideration is that self-harm may link to a combination of attack self

and attack other. For example, self-harm may serve as a method of redirecting and internalising the hostility they feel towards others for the shame they have been left with, because they do not feel able to, or safe to, express their feelings externally (Ford & Gomez, 2015). It may also be that harm to the self is inflicted through indirect strategies. For example, engaging in risky behaviours and substance use, which can lead to long-term harm to the self (Stuewig, et al, 2015). It is therefore not surprising that shame has been linked to increased risk of engaging in self-harming behaviours (Brown, Linehan, Comtois, Murray, & Chapman, 2009; Gilbert, et al., 2010; Milligan & Andrews, 2005; Schoenleber, et al., 2014; Xavier, et al., 2016). Although these studies have their limitations (e.g. cross-sectional methodology, retrospective self-reported data, limited generalizability etc.), the findings within these studies have generally been consistent with small to moderate effect sizes presenting in a range of populations.

Attack self and withdrawal also appear to have links with suicide. Those experiencing shame attack self may believe that their life has no value and morbidly attack the self. Additionally, ending one's life could be considered the ultimate withdrawal strategy, ending all struggle by withdrawing from life. This is reflected in the research that has linked shame with suicide (Bryan, Morrow, Etienne, & Ray-Sannerud, 2013; Hastings, Northman, & Tangney, 2000; Wang, et al., 2017). This link between shame and suicide has however not been consistent, with other researchers finding no relationship between shame and suicide (Wiklander, Samuelsson, Jokinen, Nilsonne, Wilczek, Rylander & Åsberg, 2012). It is not surprising that these studies produce different results, with little consistency across studies. For example, the previous three studies comprise different sample sizes (n=69, Bryan, et al., 2013; n = 498, Wiklander, et al., 2012; n = 752, Hastings, et al., 2000), various populations (e.g. outpatients at a military mental health clinic, outpatients that had attempted suicide with and without BPD and college students), different measures of shame (e.g. PFQ-2[3], TOSCA[4], ESS[5]) and different measures of

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[3] Harder Personal Feelings Questionnaire (Harder, Rockart, & Cutler, 1993)
[4] The Test of Self-Conscious Affect (Tangney, Wagner, Gramzow, 1989)
[5] Experience of Shame Scale (Andrews, Qian, & Valentine, 2002)

suicidal ideation and behaviour (e.g. SITB[6], SBQ-R[7]), including one study (Hastings et al., 2000) which created a "suicidal" and "non-suicidal" group for comparison by using the "zest for life" item on the self rating version of the Montgomery Asberg Depression Rating Scale (MADRS-S[8]). All the studies, however, used cross-sectional designs with regression analysis. Therefore, all of the studies have limited generalisability and any association between variables observed cannot infer causality.

Overall, there have been links between shame and both self-harm and suicide, however, the previous research uses measures that do not fully measure the complex nature of shame. For example, measures tend to focus on only the withdrawal and attack self aspects of shame (Elison, et al, 2006; Schalkwijk, Stams, Dekker, Peen, & Elison, 2016) whereas attack other and avoidance elements of shame could provide valuable insight into the relationship between shame and self-harm and suicide. Shame may be experienced differently when resulting in harm to the self, as opposed to harm to others, and therefore, this paper will next consider whether shame may be experienced differently for those that engage in behaviours that are harmful towards others as opposed to the self.

Shame: Harm to others

Attack other appears to directly link to behaviours that can cause harm to others. Shame can be converted into other more manageable affects such as anger (Gold, et al., 2011; Tangney, Wagner, Fletcher, & Gramzow, 1992; Tracy & Robins, 2003) which can result in aggression being externalised (e.g. verbally, physically, psychologically, sexually) and directed towards others. For example, shame-prone individuals are more likely to respond with anger when criticised (Hejdenberg & Andrews, 2011) potentially as a way to restore a positive sense of self when experiencing a threat to their ego (Tangney, Stuewig, Mashek, & Hastings, 2011). Shame has been linked with anger (Dutton, van

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[6] Self-Injurious Thoughts and Behaviours Interview (Nock, Holmberg, Photos, & Michel, 2007)
[7] The Suicidal Behaviours Questionnaire-Revised (Osman, Bagge, Gutierrez, Konick, Kopper, & Barrios, 2001)
[8] Montgomery Asberg Depression Rating Scale (Svanborg & Asberg, 2001)

Ginkel, & Starzomski, 1995; Retzinger, 1991; Tangney, Wagner, Fletcher, & Gramzow, 1992), physically aggressive behaviours (Aslund, Starrin, Leppert, & Nilsson, 2009; Gold, et al., 2011; Hundt, & Holohan, 2012; Wang, et al., 2017) and psychologically aggressive behaviours (e.g. verbal aggression) (Harper, Austin, Cercone & Arias, 2005; Kivisto, Kivisto, Moore, & Rhatigan, 2011; Thomaes, Bushman, Stegge & Olthof, 2008). Higher shame levels have also been considered predictive of recidivism (Hosser, Windzio, & Greves, 2008). This prospective study has strengths in its methodology and sample size (n=1243), however, the measure used was fairly rudimentary asking the frequency in which the respondent felt "shame" and therefore relied on emotional self-awareness and a level of understanding of the difference between shame and guilt.

Despite this research there are others that consider shame as a way of inhibiting offending behaviours (Spruit, Schalkwijk, Vugt, & Stams, 2016) or as having no real relationship with harm to others (Tangney, Stuewig, Mashek, & Hastings, 2011; Stuewig, Tangney, Heigel, Harty & McCloskey, 2010). In support of this, a meta-analysis of 25 studies found that increased shame was associated with reduced delinquency (Spruit, et al., 2016). There are however a number of limitations to this meta-analysis. The included studies had unclear conceptualisations of shame that were used interchangeably with guilt (Spruit et al, 2016; Tibbetts, 2003) and the term delinquency includes behaviours that do not result in direct harm to others, such as criminal damage and acquisitive offences. The meta-analysis also focussed upon adolescents rather than adults. Adolescents may have a different relationship with moral emotions than adults, which may reflect their differing stages of moral development, making the findings not applicable to adults. Additionally, although 'reintegrative shaming' within offending populations, e.g. making offending shameful, has been considered an effective way to reduce offending (Braithwaite, 2000), it appears that they are actually referring to what we now understand to be guilt. For example, Braithwaite (2000) states that disapproval is communicated as 'the offender [sic] is treated as a good person who has done a bad deed'. This may also be the case within some of the studies included in the meta-analysis. Finally, it is highlighted that the absence of a relationship does not provide empirical support for the use of shame as an effective intervention to reduce recidivism (Jones, 2014).

This relationship between shame and harm to others has been considered to potentially be more complex. Tangney and colleagues (2014), conducted a longitudinal study of 476 incarcerated (pre and post-trial) individuals. Shame was assessed at initial incarceration and one-year post-incarceration, alongside recidivism data (self-report and official records). The study used an adapted version of the TOSCA, developed for use with incarcerated individuals and other "socially deviant [sic]" groups, the TOSCA-SD[9]. Within this study, the relationship between shame and recidivism did not present when considering overall shame-proneness or shame's "negative self-appraisal" subscale. However, shame combined with "externalisation of blame" (e.g. a defensive shame response) and shame's "behavioural avoidance" subscale increased recidivism. This study had key strengths in its longitudinal design and triangulated data collection method. However, it has limited generalisability given its focus on recently incarcerated individuals and the measure of shame being specifically focussed on a "socially deviant [sic]" population.

Indirectly, avoidance links to behaviours that may result in harm to others e.g. self-soothing techniques that increase the chances of harm to others and controlling behaviours, which may serve to avoid shame-based triggers. For example, shame may be avoided by using substances, such as alcohol (Blatt, Rounsaville, Eyre, & Wilber, 1984; Dearing, et al., 2005; Stuewig, Tangney, Kendall, Folk, Meyer, Dearing, 2015), which in turn can be linked to increased risk of violence (Stoddard, et al., 2015). An alternative way to avoid situations that trigger shame, and an effective denial-based approach, can be seen in controlling others with shame being more recently been linked to coercive controlling behaviours (Kaplenko, Loveland, & Raghavan, 2018). Denial of shame as an avoidance strategy has also been considered to potentially link with violence. For example, extreme ways to avoid having to acknowledge shame or experience shame has been postulated, with reflection on clinical practice in forensic settings, to link to serious violence including murder and multiple murders (Gilligan, 1997; Scheff, 2011).

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[9] Test of Self-Conscious Affect- Socially Deviant version (Hanson & Tangney, 1996)

An area that has not been fully explored is the link between shame and sexually abusive behaviours directed towards others. Research is limited, inconsistent and explores related concepts rather than directly exploring sexual harm. For example, shame was found to correlate positively with sexually risky behaviours (Stuewig, et al., 2015) and sexually coercive aggression within relationships (Kivisto, et al., 2011). However, another study found no relationship with sexually risky behaviours or the number of sexual partners (Stuewig, Tangney, Mashek, Forkner, & Dearing, 2009). Reflecting on research within the field of sexual recidivism, shame may be reflected to some level within empirically supported risk factors, such as social isolation and not having an intimate or emotionally meaningful relationship with another adult (e.g. Farrington, 2003; Marshall, 2010; Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Ward, Keenan, & Hudson, 2000). For example, shame may increase social isolation and emotional intimacy may be avoided to prevent exposure of the 'shamed self'.

A number of hypothesised pathways from shame to sexual offending behaviours are also grounded in research from related fields. Two of these hypothesised pathways are presented here. One hypothesised pathway may relate to the use of sex as a way to avoid the distress associated with shame. For example, sex can be a self-soothing strategy, as it releases Oxytocin in the brain, which can be used or abused to gain relief from emotional (e.g. shame) distress (Uvnäs-Moberg, Handlin, & Petersson, 2014). This focus on sex to soothe the distress of shame may also link to hypersexuality / sexual addiction (Dhuffar & Griffiths, 2014; Echeburua, 2012; Gilliland, South, Carpenter, & Hardy, 2011; Reid, Harper, & Anderson, 2009), which is an empirically supported risk factor linked to sexual offending (Hanson & Harris, 2000; Kingston & Bradford, 2013; Klein, Schmidt, Turner, & Briken, 2015; Knight & Simms-Knight, 2003; Marshall & Marshall, 2006; Marshall, Marshall, Moulden, & Serran, 2008). A second hypothesised pathway links shame withdrawal strategies with an increased likelihood of engaging in sexually harmful behaviours to get their sexual needs met. These may include non-contact sexual offences where they remain withdrawn or (e.g. internet-based offending) or contact offences as the only way to gain sex in a socially disconnected environment. In fact social bonds are

negatively related to offending (Horney, Osgood & Marshall, 1995; Laub, Nagin, & Sampson, 1998) and these findings may also be reflected in well documented risk factors associated with sexual recidivism such as social isolation and not having an intimate or emotionally meaningful relationship with another adult (e.g. Farrington, 2003; Marshall, 2010; Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Ward, Keenan, & Hudson, 2000). The research focussed on the link between shame and sexual harm committed against others is very limited and it is likely that any relationship between shame and sexual harm to others is a complex one that would benefit from being explored in greater depth.

Shame: A summary

In brief summary, shame is a concept that has been explored for many years and yet there still remains some level of disparity in terms of its conceptualisation. However, from an integrated perspective, this paper recognises that shame has an affective physiological experience at its core, with cognitive, relational, and behavioural aspects closely intertwined. Shame can also manifest in different ways (e.g. attack self, attack other, withdraw, avoid). Therefore, unidimensional measures of shame used in past research may not have fully captured the complex multifaceted nature of shame. Shame has also been considered as a method of reducing harm as well as a 'toxic' emotion that has the potential to increase risk of harm, and therefore, warrants further exploration. In order to gain a greater understanding of shame and how it manifests it can help to consider the potential origins of shame. One possible hypothesis, particularly given the relational element of shame, is that maladaptive shame can develop from early experiences of adversity.

Shame and ACE

Given the complex nature of shame and the potential behavioural consequences interest within the literature has also been on the origins of maladaptive shame. The link between ACE and harm to self and others in later life and additionally the link between shame and

harm to self and others may give some indications of the role that ACE has in the development of shame. As previously explored shame has a relational element which has a theoretical grounding in attachment (Ainsworth, et al., 1978; Bowlby, 1969, 1973, 1980) and object relation theories (Klein, 1932, 1957; Fairbairn, 1952). Children who experience ACE are considered more likely to develop insecure attachment styles (Baer & Daly Martinez, 2006) and in turn experience lower levels of self-esteem and higher levels of shame (Passanisi, Gervasi, Madonia, Guzzo, & Greco, 2015).

Traumatised individuals including those that have experienced abuse and neglect in childhood, can experience significant levels of shame (Aakvaag, Thoresen, Wentzel-Larsen, Dyb, Roysamb, & Olff, 2016; Gluck, et al., 2017; Harman & Lee, 2009; Jonsson and Segesten 2004; Karan, Niesten, Frankenburg, Fitzmaurice, & Zanarini, 2014; Messman-Moore & Coates, 2007). In fact, shame is considered a common consequence for individuals that have ACE (Feiring & Taska, 2005; Finkelhor & Browne, 1985). When evaluating the impact of subtypes of ACE, shame has been found to be associated with sexual abuse, physical abuse, psychological abuse, bullying, neglect and witnessing domestic violence (Aakvaag, et al., 2016; Ashy, et al., 2017; Ellenbogen, et al., 2015; Karan, et al., 2014; Messman-Moore & Coates, 2007; Strøm, Aakvaag, Birkeland, Felix, & Thoresen, 2018). It is possible that children that do not experience shame may feel more able to recognise that the responsibility for the unhealthy behaviour inflicted upon them belongs elsewhere and therefore they may be more able to connect with others, share their experience and gain support (e.g. facilitating trauma processing). However, those that experience shame are likely to experience this emotion as a significant barrier to accessing this trauma processing strategy. This is likely to be further heightened if the individual who inflicted the harm on them, is the only person they can access for support e.g. the caregiver.

Differences were found in the relationship between ACE and shame when considering the gender of the victim, the gender of the perpetrator and how close the victim was to them. Harsh parenting and parental rejection have been linked to high levels of shame (Stuewig

& McCloskey, 2005). Similarly, experiencing a maternal figure as apathetic and cold was related to higher levels of shame, whilst, a blaming and attacking maternal figure was not (Claesson & Sohlberg, 2002). However, this relationship appears influenced by the type of abuse and by the gender of perpetrator and victim. In females, psychological abuse from either parent increased shame, whilst in males, only maternal psychological abuse and physical abuse were associated with increased shame (Ashy, et al., 2017). In line with these findings, it is indicated that abuse from those that the victim was closest to, depended upon and trusted, such as a parent, was significantly associated with shame, whereas ACE that involved strangers or non-interpersonal events did not (Platt & Freyd, 2015). Also, having a sense of being rejected and dismissed triggered greater levels of shame. Similar to other findings around cumulative trauma, multiple ACE are also associated with increased shame (Aakvaag, et al., 2016; Stotz, Elbert, Muller, & Schauer, 2015). There is likely a complex relationship between ACE and shame with not all victims of ACE experiencing shame or maintaining shame into adulthood, or therefore influencing later behaviours towards the self and others.

Shame appears to have some relationship with ACE, which provides support for the theory that maladaptive shame originates in early childhood experiences of adversity. Given the complex relationship that ACE has with harm to self and harm to others, it is possible that shame may have a role in mediating the relationship between ACE and later harm. If shame does have a mediating role it highlights a modifiable psychological factor that can be targeted to reduce the risk of harm to self and others. In addition, a related concept that may shed further on the complex nature of shame and its relationship with ACE, harm to the self and others, is self-compassion.

Self-Compassion

Compassion is the ability to be kind, caring and understanding towards the suffering and difficulties of others. Self-compassion is using this same compassion but directed towards the self. Self-compassion involves mindfully recognising our own suffering, our common humanity and being kind to ourselves (Neff, 2011). Being mindful allows us to

acknowledge our emotional state in the moment and as such recognise when we are in emotional distress so that we can tolerate it and manage it in a healthy way. Recognising our common humanity allows us to recognise how we are connected to humanity and in turn acknowledge that being imperfect, having problems and being in distress is a shared human experience. Additionally, being kind to ourselves involves showing care by being understanding of ourselves and our imperfections as well as providing a reassuring internal voice. This thesis argues that self-compassion may be an important psychological factor when exploring the relationship between ACE and harm. Therefore, here it is explored in greater depth in relation to ACE, harm to self, harm to others and shame.

Self-Compassion and Adverse Childhood Experiences

Although there is an increased focus on how to foster the development of self-compassion throughout the life span (Neff, 2003; Gilbert, 2009) it is considered that the ability to be self-compassionate originates in early childhood experiences and the healthy development of the attachment and affect regulation systems (e.g. Cozolino, 2014; Gilbert, 2005; Schore, 2016; Siegal, 2012). Attachment between child and carer is considered to have a core function of providing a safe and stable base in which the child can explore and develop, as well as gain comfort when they experience distress (Ainsworth, et al., 1978; Bowlby, 1969). It also increases the chances of offspring, heavily dependent on their caregivers, surviving, and highlights the evolutionary function of attachment (Gilbert, 2005). The attachment that children develop with their caregivers provides an 'internal working model' of themselves and others, which then sets the template for future relationships, including how they view themselves in relation to others (Bowlby, 1969; Bartholomew & Horowitz, 1991). Depending on the interactions of the parental figure and the child they are likely to develop secure or insecure attachment (e.g. preoccupied, fearful, dismissive) styles. Secure attachment involves an individual holding a positive view of the self, trusting others and being comfortable with emotional intimacy. This develops through parents who are emotionally available, sensitive and responsive to their child's needs (Siegal, 2012). Characteristics reflective of

a secure attachment are considered to facilitate the development of self-compassion. For example, warmth, support (Irons, Gilbert, Baldwin, Baccus, & Palmer, 2006; Kelly & Dupasquier, 2016; Neff & McGehee, 2010), and emotional validation (Westphal, Leahy, Pala & Wupperman, 2016). Alongside this, a secure attachment relationship provides a model for how to engage in a caring manner (Gilbert, 2005). Therefore, children who have secure attachments may be more likely to feel positive and confident about themselves and in turn worthy of care and love (Collins, Guichard, Ford, & Feeney, 2004: Mikulincer & Shaver, 2007). This secure attachment relationship is considered to provide the opportunity for the caregiver to model compassion and facilitate the development of the child's compassionate inner dialogue (Neff & McGehee, 2010). Those with insecure attachments, however, could be considered more likely to have experienced environments that threaten their safety, wellbeing and sense of self and therefore may be colder and self-critical rather than self-compassionate (Gilbert & Proctor, 2006).

Those with secure attachments are considered to be more able to develop positive coping responses (Schore, 2016; Siegal, 2012) whilst those with insecure attachment are less able to regulate their stress response (Corbin, 2007). Gilbert's (2005;2009) postulates an affect regulation system that involves the interaction between the threat, drive and soothing systems. The threat system warns of imminent danger (physical, psychological etc) and prepares the body to respond to this imminent danger. The soothing system, which is considered to have developed alongside the attachment system, plays a significant role in helping to settle the threat system, allowing the return to a calmer resting state, and self-compassion has an important role within this (Depue & Morrone-Strupinsky 2005; Gilbert 2005, 2009). These findings mirror those highlighted within attachment research and therefore supports the notion of the attachment system and affect regulation systems being interconnected in some way. From an alternative perspective, self-compassion has been directly likened to the secure base referred to within attachment theory. The secure base within attachment theory highlights the importance of the attachment figure providing a stable base in which a child can explore the world, knowing that they can return to this stable safe haven if they become distressed. Self-compassion

is postulated to be an internal secure base in which an individual can safely explore their emotional inner world.

Self-compassionate parents have been found to be more likely to develop self-compassion in their offspring (Siegal, 2012). This may reflect the interactions between the parental figure and child (Haviland & Lelwica, 1987), with the self-compassionate parent more able to be compassionate to the child or present as a healthy role model for the child to learn from. However, it could also reflect epigenetics, and heritable changes in gene expression, allowing greater capacity to be self-compassionate (Gervai, 2009; Siegal, 2012). Considering how self-compassion may be developed within healthy early childhood experiences, it is not surprising that ACE interrupt the development of self-compassion (Tanaka, Wekerle, Schmuck, & Paglia-Boak, 2011; Vettese, Dyer, Li, & Wekerle, 2011) and then reduce the capacity to manage negative emotional experiences, such as shame.

An indirect relationship between ACE and self-compassion presents through their relationship with shame. Adverse childhood experiences have been linked to higher levels of shame (Aakvaag, et al., 2016; Gluck, et al., 2017; Harman & Lee, 2009; Jonsson & Segesten 2004; Karan, et al., 2014; Messman-Moore & Coates, 2007) and self-compassion may have some role in reducing this (Ashworth, Clarke, Jones, Jennings, & Longworth, 2015; Au, Sauer-Zavala, King, Petrocchi, Barlow, & Litz, 2017; Gilbert & Proctor, 2006; Johnson & O'Brien, 2013; Lucre & Corten, 2012). If self-compassion is a competence that prevents toxic shame developing, an effective way to maintain resilience through traumatic experiences, a pathway to gaining help and support, or is a way to heal from the harm caused by traumatic experiences that have already occurred, then self-compassion has great value.

Self-compassion and harm to self and others

Self-compassion should theoretically be considered a helpful skill in relation to reducing harm inflicted on the self and others. However, the research base is limited and demonstrates some conflict, particularly in relation to harm to others.

Self-compassion and its link with harm inflicted on the self has been fairly consistent with self-harmers being found to have lower levels of self-compassion than those that do not (Gregory, Glazer, & Berenson, 2017; Jiang, You, Zheng & Lin, 2017). Self-compassion may also reduce harm to the self by influencing other related factors. For example, self-compassion is positively associated with positive affect (Leary, Tate, Adams, Batts Allen, & Hancock, 2007; Neff, Rude & Kilpatrick, 2007b; Neff & Vonk, 2009), well-being, life satisfaction (Neely, Schallert, Mohammed, Roberts, & Chen, 2009), and social connectedness (Neff, 2003, Neff et al, 2007b). It is also negatively associated with stress, anxiety and depressive symptoms (MacBeth & Gumley, 2012). However, self-compassion does not appear to outwardly distinguish between healthy and unhealthy strategies of 'being kind to the self'. For example, self-compassion can be considered to overlap with elements of narcissism (Barry, Loflin, & Doucette, 2015) which can result in a superficially inflated sense of self rather than a genuine positive self-regard. In addition, some unhealthy behaviours may be soothing in the short term, and therefore considered self-compassionate, but also damaging to the self or others in the longer term (e.g. alcohol, drugs etc). In line with this, it is possible that some individuals may consider self-harming as a self-compassionate soothing behaviour despite it also being damaging. Therefore, the relationship between harm inflicted on the self and self-compassion may not be as clear as it may initially seem.

Although there is limited research that directly links self-compassion with harm to others a recent study found that self-compassion negatively correlated with aggression (Barry, et al., 2015). This finding however presented with a small effect size and was only significant for proactive aggression and not reactive aggression. This research also evidenced a differing relationship between aggression and the different components of self-compassion. Further research highlights that an indirect relationship between self-

compassion and harm to others may present through the link between self-compassion and compassion towards others. Within a meta-analysis that included 38 studies significantly lower levels of empathy (i.e. a key element of compassion towards others) have been found within those that had committed offences than those that had not (van Langen, Wissink, van Vugt, van der Stouwe & Stams, 2014) and therefore associations between self-compassion and compassionate empathy towards others may shed further light on our understanding of the relationship between self-compassion and harm to others. Firstly, self-compassion and compassion towards others (e.g. empathy) are considered to involve similar regions of the brain, highlighting a close connection between the two (Longe, Maratos, Gilbert, Evans, Volker, Rockliff, & Rippon, 2010; Lutz, Brefczynski-Lewis, Johnstone, & Davidson, 2008). Self-compassion has also been found to positively correlate with compassion towards others, albeit demonstrating a small effect size (Neff & Pommier, 2012), and those that have support-giving attitudes towards others tend to have greater levels of self-compassion (Breines & Chen, 2013). These findings have not been supported within a recent study, which found a weak but not significant correlation between self-directed and other-directed compassion (Lopez, Sanderman, Ranchor & Schroevers, 2018). However, Neff and Pommier (2012) found that the association between self-compassion and compassion towards others was stronger when other mediators were included. Therefore, self-compassion may have a role in moderating other factors that increase compassion towards others rather than having a direct effect itself. Similarly, self-compassion's influence on other factors linked to harm inflicted on others may highlight the value of self-compassion in understanding harm inflicted on others. For example, self-compassion has been found to be negatively associated with rumination (Neff, 2003; Neff & Vonk, 2009; Raes, 2010), shame (Gilbert, et al., 2010) and psychopathology (MacBeth & Gumley, 2012). Self-compassion also may have a greater relationship with a reparative aspect of harm towards others and therefore whether the harm inflicted on others is repeated (e.g. recidivism). For example, self-compassion has been found to increase the likelihood that an individual would respond to a mistake they made (e.g. harmful behaviour towards others) by wanting to make amends, avoid repeating the behaviour, and with a desire to change and improve (Breines & Chen, 2012). Despite these findings, another study found that those with higher levels of self-compassion were less likely to accept their own 'immoral behaviours' (Wang, Chen,

Poon, Teng & Jin, 2017). Our understanding of the relationship between self-compassion and harm to others remains inconsistent and one that would benefit from being explored further.

Self-compassion and shame

Given the significant impact that shame can have, there has been an increased focus on ways to address this distressing emotion. The area that has gained the greatest traction in recent years has been the development of self-compassion and its link to shame and cognitive elements of shame, such as self-criticism. Supporters of the value of self-compassion refer to it as the 'antidote' to the threat linked with shame (Gilbert & Proctor, 2006). In line with this self-compassion has been found to buffer against negative affect, such as shame, triggered by a threat to the ego (Neff, Kirkpatrick, & Rude, 2007). This is reflected in the research that found a negative association between aspects of shame and self-compassion (Barnard & Curry 2012; Neff, 2011; Zhang, et al., 2018). Similarly, research has found that self-compassion-based interventions can reduce shame and elements of shame, such as self-criticism/self-blame (Ashworth, et al., 2015; Au, et al., 2017; Braehler, Gumley, Harper, Wallace, Norrie, & Gilbert, 2012; Gilbert & Proctor, 2006; Lucre & Corten, 2012). Self-compassion has also been found to partially mediate the relationship between shame and hypersexuality, which indicates the impact self-compassion may have on reducing risk related shame (Reid, Temko, Moghaddam, & Fong, 2014).

The effectiveness of self-compassion-based interventions in reducing shame has been inconsistent. Self-compassion-based interventions have demonstrated a capacity to reduce the negative affective experience of shame by soothing the threat system (Rockliff, Gilbert, McEwan, Lightman & Glover, 2008). However, despite positive findings, not all individuals within this study benefited, with those that had the highest levels of self-criticism least likely to experience positive change (Rockliff, et al, 2008). This finding is reflected in another study that found self-compassion-based interventions did not reduce self-criticism (e.g. Gilbert & Irons, 2004). It is possible that those who experience

high levels of shame may find the experience of self-compassion exposing, threatening and given their likely unhealthy experiences of attachment they may, in fact, find the idea of self-compassion frightening (Gilbert, McEwan, Gibbons, Chotai, Duarte, & Matos, 2012; Gilbert, McEwan, Matos, & Rivis, 2011). It is important to note that for some individuals their abuse followed a period of positive behaviour towards them (e.g. grooming) and therefore a kind compassionate other may still evoke triggering memories of abuse and therefore shame. In addition, being kind to oneself and giving to oneself may connect with them feeling 'selfish', 'self-centred', or 'self-pitying', which may be part of their personalised shame experience (e.g. being called selfish etc when caring for self rather than meeting the needs of a demanding narcissistic carer), which would serve to exacerbate shame (Gilbert & Irons, 2004; Gilbert et al, 2012). Alternatively, they may associate feeling happy as a feeling that does not last (Gilbert & Irons, 2004; Gilbert et al, 2012). Therefore, although shame and self-compassion have been linked the research does not consistently support self-compassion as a factor that reduces shame. This may reflect a complex relationship between the two factors. For example, there are three core components to self-compassion and therefore each of these components may have differing relationships with shame.

When exploring the relationship between the different components of self-compassion and other factors it has been recognised that the different elements of self-compassion can relate differently (Barry, et al., 2015). Therefore, the same may be possible when considering the relationships between the subtypes of shame and the individual elements of self-compassion. The mindfulness-based component of self-compassion has been found to be effective at reducing shame and the cognitive aspect of shame (Goldsmith, Gerhart, Chesney, Burns, Kleinman, & Hood, 2014; King, et al., 2013). Individuals that experience trauma may dissociate and numb their feelings and therefore mindful awareness and acceptance may help to prevent this dysfunctional strategy occurring (Kerig, et al., 2012; Vonderlin, et al., 2018). However, from a therapeutic standpoint, sitting with an excruciating painful self-conscious emotion, such as shame, without a stable connection to a healthy self (e.g. a compassionate internal voice) or healthy other (e.g. a compassionate therapist), may in fact serve to create another traumatic memory

for the individual, particularly if they are unable to tolerate it and experience it as a 'failure', which in turn reinforces shame. The loving kindness component of self-compassion has also been found to reduce shame (Shahar, Szsepsenwol, Zilcha-Mano, Haim, Zamir, Levi-Yeshuvi & Levit-Binnun, 2015) with people who are kind to themselves viewing their worth as unconditional (Barnard & Curry, 2011). However, being kind to ourselves involves an understanding of what being kind involves and individuals that have high levels of shame may not know how to be kind to themselves and when they do practice it, it is likely to feel alien to them, and to some level even frightening (Gilbert, McEwan, Gibbons, Chotai, Duarte, & Matos, 2012; Gilbert, McEwan, Matos, & Rivis, 2011). The common humanity component has not been directly explored in terms of its relationship shame, however, it presents as the opposite action to the withdrawal aspect of shame, in that it helps the individual focus on their similarity to others as part of a community, rather than differences, increasing recognition that making mistakes and being 'imperfect' is part of being human. Increased self-compassion is associated with a greater willingness to express feelings and be socially connected to others (Neff & Germer, 2013). Although recognising shared humanity is important for an individual with high levels of shame it also opens the flood gates to an opportunity to compare oneself against others, which may exacerbate one's sense of shame. the self-kindness component

Although there are three separate components it has been considered that the components of self-compassion are intertwined and serve to strengthen each other (Barnard & Curry, 2011). The combination of these elements of self-compassion are thought to reduce shame because they help to deactivate the threat system (Gilbert, 2010) and they strengthen emotional resilience (Vettese, Dyer, Li, & Wekerle, 2011). Although self-compassion appears to have some validity, as highlighted, those who experience high levels of shame may have emotional and relational barriers that prevent interventions based on self-compassion being effective. A critique of compassion focussed treatment interventions is that they tend to be short term interventions (e.g. an 8-week course[10]) and given the pervasive nature of shame, it is not surprising that this

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[10] The intervention length can be influenced by organisational restraints or the restrictions in place when wanting to evaluate an intervention for research purposes.

may be insufficient. Reflecting on the value of limited reparenting as an intervention (Young, et al., 2003) it may be that self-compassion needs to be developed at the right stage of therapy e.g. following the development of a stable therapeutic base and allowing some limited reparenting. Alternatively, it could be weaved through longer-term interventions that allow for time to develop a stable therapeutic relationship with a self-compassion themed philosophy underlying it. A stable therapeutic base would allow the opportunity for a healthy attachment to be developed, along with a healthy role model with whom to develop self-compassion.

Self-compassion may be an important psychological factor, alongside shame, in influencing the relationship between ACE and later harm. Therefore, it is important to explore previous research that has considered shame and self-compassion as mediators between ACE and later harm.

Shame and self-compassion as mediators between ACE and harm

There is clearly value in understanding the relationship between ACE and harm inflicted on the self and others and establishing why some individuals go on to have happy healthy and fulfilling lives after ACE and others experience devastating ripples across their whole lives. Due to human complexity, which is reflected in the inconsistent findings, there are likely to be important mediators in the relationship between ACE and harm. Given the relationship between ACE and shame, and the relationship between shame and harm to self and others, shame has been considered as a potential mediator within a few, somewhat limited, papers. Only a small number of studies have considered the mediating impact of shame and these have tended to only consider aspects of shame (e.g. stigma, self-blame), to measure shame from one dimension (e.g. the withdrawal dimension of shame), or to only look at specific types of ACE or harm and have fairly small or focussed samples. For example, A study of 94 adolescents found a relationship between emotional neglect and self-harm, with self-criticism partially mediating the relationship (Glassman,

et al., 2007). These findings are based on a small adolescent sample and the findings are limited to self-harming behaviours leaving a gap in our understanding of self-criticism within those at risk of suicide. Given that most individuals that self-harm do not attempt suicide it is important to establish pathways that distinguish between self-harming behaviours and suicide (Ford and Gomez, 2015)

A limited number of studies have also considered shame as a mediator between ACE and harm to others, with the greatest focus being on aggressive behaviours in intimate relationships. One study, within a sample of university students (n=153), explored the link between ACE and violence within intimate relationships and found that shame, using the Internalised Shame Scale (Cook, 1987, 1994, 2001), mediated the relationship between childhood sexual abuse and aggressive conflict in dating relationships (Kissee, 2012). Another study, with a sample of 129 mothers who had at-risk children, found that shame, measured with the Differential Emotions Scale (DES-IV; Izard, Libero, Putnam, & Haynes, 1993), mediated the relationship between childhood sexual abuse and interpersonal conflict (e.g. verbal and physical aggression) but not child maltreatment (Kim, Talbot, & Cicchetti, 2009). A longitudinal study has also explored the relationship between ACE and intimate partner violence, with shame as a mediator, and found in a sample of 118 children and adolescents in protective services that stigmatisation (e.g. a related aspect of shame) did not mediate the relationship between severity of ACE and aggression in intimate relationships (Feiring, Simon, & Cleland, 2009). Although this study was longitudinal, it has a relatively small sample and it measured ACE based on severity (e.g. whether penetration used, forced etc) rather than subtypes of ACE. It also focussed on stigmatisation rather than shame and the different dimensions of shame. Overall, these studies highlight that shame may have a potential role in mediating the relationship between aspects of ACE and interpersonal aggression, however, stigmatisation, a related concept to shame, did not. It may be that shame does not cause later harm to others, in line with the longitudinal study findings or that stigma is measuring something quite distinct from shame, as discussed previously. It also highlights a greater need for larger sample sizes, wider populations, and a clear conceptualisation of shame.

A study that explored shame proneness and narcissistic vulnerability, in a sample of 400 undergraduate students, found that shame partially mediated the relationship between childhood physical abuse, hostility and trait anger, but not physical aggression or verbal aggression (Keene & Epps, 2016). This study had a reasonable sample but was restricted to undergraduate students and it is also noted that the reported effect sizes were small. The only study to measure shame in a manner that recognised it can present in different ways, explored 'expressed shame' and 'converted shame' as mediators between abusive parenting in childhood and violent delinquency, in a sample of 112 adolescents (Gold, et al., 2011). They found that converted shame, measured by combining the externalising and detachment subscales from the TOSCA-2 (Tangney, Wagner, & Gramzow, 1989) measure, mediated the relationship between parental abuse (physical and psychological aggression) and violent delinquency. The externalising and detachment subscales could have some similarities with Nathanson's (1992) 'attack other' dimension and therefore this study positively explores more than one dimension of shame. Given a different relationship was found between 'expressed shame' and 'converted shame' it also provides further evidence that the different behavioural manifestations of shame will have a different relationship with ACE and harm to self and others. However, it's small specific sample (112 adolescents) limits the generalisability of the findings and it only considers the impact of aggressive parenting in childhood.

Although self-compassion has been increasingly studied and explored in connection to shame there do not appear to be any studies that have considered self-compassion as a mediator within the relationship between ACE and harm to self and or others. This, therefore, would benefit from being explored alongside the mediating effect of shame.

The current research

Reviewing the previous literature there still remain clear gaps in our understanding of shame. For example, it is often considered as solely a unidimensional experience, with

only overt self-attacking and withdrawal behaviours being considered to represent shame. Our understanding of the complex representation of other emotions (e.g. fear presenting as a fight, flight, freeze or appease response) does not appear to have been fully recognised in the same way when considering shame. In addition, the literature presents a strong case for understanding shame as a complex emotion with additional difficulties associated with its measurement. For example, shame can be hidden, misunderstood or converted into another emotion. It is also recognised that it can be shaming to acknowledge and expose feelings of shame. Although there has also been a greater focus on self-compassion and its potential to 'inoculate' against shame this is a relatively new area of focus within the research and would benefit from being explored with wider samples, in relation to negative sequelae associated with shame and with varying behavioural manifestations of shame (e.g. does self-compassion reduce attack other based shame manifestations as well as attack self). Future research is needed to increase our understanding of shame from a multidimensional perspective and its relationship with self-compassion and negative sequelae such as harm to others and the self. Understanding shame as a more complex multidimensional concept may allow the opportunity to increase our understanding of how shame is related to the different forms of harming behaviours and whether different shame profiles present with different types of harm. Similarly understanding whether self-compassion can reduce shame, and what manifestations of shame it has the greatest impact upon, could be helpful in clinical practice when treatment planning.

Past literature has also considered from a range of perspectives the impact that ACE have on later sequelae such as harm towards the self and others, but it can at times limit its focus onto the direct relationship between the two rather than identifying the psychological pathways of causation. Although preventing ACE would have a potentially significant impact on negative sequalae it would also be helpful to understand why some children with ACE go on to have healthy futures and others do not. This is particularly important given prevention is not always possible and it certainly is not for those that have already experienced ACE and are currently suffering from the psychological consequences of it. If modifiable psychological factors such as shame and self-

compassion mediate the relationship between ACE and harm to the self and others, then it provides treatment pathways to support those that are already suffering the consequences of ACE and those where prevention of ACE is not successful.

Finally, it is fully recognised that there has been vast interest in ways to reduce self-harming behaviours and harm inflicted on others e.g. crime. In line with this there has been some consideration of ACE and shame, however, what is not fully considered is how shame may mediate this relationship. The limited number of studies that have considered shame as a mediator do not appear to fully grasp the complex nature of shame (e.g. it's multidimensional nature), have not considered self-compassion as a potential influencer within these relationships and have tended to have relatively small samples that are limited to specific populations e.g. students. It is possible that fully acknowledging the complexity of shame may provide a greater understanding of the complex relationship between ACE, shame and harming behaviours and, in turn, provide a clearer understanding of shame as a risk factor as well as a treatment need (see figure 2.4).

Figure 2.4: Conceptual Model of Pathways from ACE to Harm
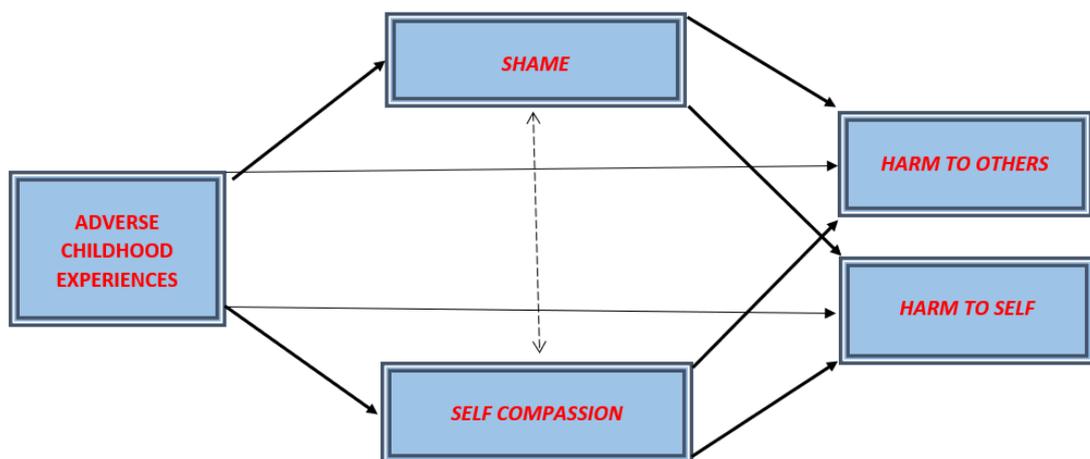
This current research has been designed with reflection on the strengths and weaknesses of past research, and clinical experience, to ensure that its original contribution to the field directly influences clinical practice. This research aims to provide a clearer

understanding as to why some individuals that have adverse childhood experiences later engage in harmful behaviours towards themselves and/or others, and others do not. It will aim to provide clear and distinct risk and treatment profiles that highlight those individuals at risk of self-harm, suicide, and behaviours that harm others, including offending. The findings will have the potential to benefit children who have ACE, children and adults that are at risk of self-harm or suicide, children and adults at risk of offending, and those within custody at risk of recidivism. In line with this the findings may help to reduce self-harm, suicide, offending /reoffending and reduce further victims in a range of populations.

As previous studies have not fully explored the complex multidimensional nature of shame it is considered that it would be beneficial to use a measure that reflects Nathanson's Compass of Shame (1992). This then expands on previous research that considered shame as a unidimensional concept and could provide greater insight into whether different manifestations of shame relate to ACE and harming behaviours in the same way. If the relationships differ, based on the different dimensions of shame, then different pathways of psychological causation could present and provide distinct profiles and therefore more tailored and responsive interventions. Due to the suggested relationship between shame and self-compassion and the limited research exploring it as a mediator, it would also be important for research to include measures of self-compassion when exploring the relationship between shame and other variables. As there is conflicting evidence with regards to the relationship between the specific ACE and other variables it is considered that research would benefit from using measures that include a wide range of ACE as well as a cumulative total score. Finally, this research also recognises that harm can be inflicted on others in various ways both in terms of nature and severity and therefore it is important that research uses measures that capture this breadth. It is also considered that past research has solely focussed on specific populations despite shame being a human condition that will present across populations and therefore future research needs to capture wider populations within the samples such as forensic, clinical and community populations. Additionally, previous research has

generally had small sample sizes and therefore research that continues to explore this area needs to involve a large sample.

The model used within this research is discussed in greater detail within the method section of this report, in line with the reasons for using the Compass of Shame Scale (Elison, Lennon, & Pulos, 2006). Here the rationale for the choice of Tomkins and Nathanson's model of shame (e.g. the compass of shame) (Nathanson, 1992) and the strengths of this model are briefly summarised in the model's ability to encapsulate four key aspects of shame. Firstly, the model acknowledges shame as multidimensional and reflects the different elements of shame identified within the introduction (e.g. cognition, affect etc) in a balanced way. This is important because the summary of current research on pages 31 to 45 shows there is strong evidence that shame is multi-dimensional. Secondly, the model acknowledges that shame is multifaceted and therefore can manifest in different ways (e.g. withdrawal, attack etc). This is reflected in previous research that has found shame related to a broad sweep of conditions and behaviours (e.g. see page 43-51). Thirdly, the model acknowledges shame as a trait that is relatively stable and related to a pattern of responding. Conceptualising shame as a trait is important when considering shame as a predictor of future behaviours, such as harm to self and others explored within this research. Finally, as a practice informed research project, I draw upon experience as a practitioner psychologist and the Compass of Shame model has the capacity to capture shame as it presents in practice and therefore has high practitioner applicability.

This research will test the model presented in figure 2.4, which postulates that ACE will be related to self-harming behaviours and behaviours that cause harm to others, through the mediators of shame and self-compassion. There will also be a direct relationship between ACE and harming behaviours (self and others). It is expected that there will be a different relationship between ACE and harm, as a result of the way shame manifests: withdrawal, avoidance, attack self, attack other.

This research aims to explore whether shame and self-compassion mediate the relationship between adverse childhood experiences (ACE) and later behaviours that result in harm to self and others by testing the following overall hypotheses: -

1. There will be a positive relationship between ACE and measures of harm to others and harm to self.

2. There will be a positive relationship between shame and measures of harm to self and harm to others

3. There will be a negative relationship between self-compassion and harm to self and others

4. There will be a positive relationship between ACE and shame

5. There will be a negative relationship between ACE and self-compassion.

6. There will be a negative relationship between measures of shame and measures of self-compassion.

7. Shame will have a mediating impact on the relationship between ACE harm to self and others.

8. Self-compassion will have a mediating relationship between ACE and harm to self and others.

Method

This research adopts a cross-sectional design which involves gaining current and retrospective data from a sample of adults from the community and custodial settings.

Participants

Adults based in the community and within five prisons (four male establishments and one female establishment) were approached to take part in the study. These prison establishments were rated from category A-C and a large purposive sample was gained (N= 1111). One-third of the sample (n= 331) represent participants from custodial settings. Of the total sample, 45% were female, 49% were male, 2% were non-binary and 4% did not indicate their gender. The sample ranged from 18 to 95 years of age. The majority of the sample were white British/Irish (74%), single (49%) and considered themselves Atheists (48%).

Table 2.2: Sample Demographics

		Forensic	Community	Total
Gender				
	Male	280 (84.6%)	217 (27.8%)	497 (44.7%)
	Female	48 (14.5%)	492 (63.1%)	540 (48.6%)
	Non-binary	3 (0.9%)	15 (1.9%)	18 (1.6%)
Marital staus				
	Single	160 (48.3%)	384 (49.2%)	544 (49%)
	Married	60 (18.1%)	242 (31%)	302 (27.2%)
	Widowed	6 (1.8%)	8 (1%)	14 (1.3%)
	Divorced	69 (20.8%)	55 (7.1%)	124 (11.2%)
	Separated	30 (9.1%)	30 (3.8%)	60 (5.4%)
Ethnicity				
	White British / Irish	298 (90%)	524 (67.2%)	822 (74%)
	Black Bristish / Irish	4 (1.2%)	1 (0.1%)	5 (0.5%)
	Asian British / Irish	6 (1.8%)	16 (2.1%)	22 (2%)

	Hispanic / Latino	4 (1.2%)	7 (0.9%)	7 (0.6%)
	Black other	3 (0.9%)	5 (0.6%)	4 (0.4%)
	Asian other	2 (0.6%)	12 (1.5%)	14 (1.3%)
	White other	4 (1.2%)	133 (17.1%)	137 (12.3%)
	Other	5 (1.5%)	20 (2.6%)	25 (2.3%)
Religion				
	Atheist	100 (30.2%)	431 (55.3%)	531 (47.8%)
	Christian	75 (22.7%)	137 (17.6%)	212 (19.1%)
	Church of England	56 (16.9%)	39 (5%)	95 (8.6%)
	Catholic	33 (10%)	39 (5%)	72 (6.5%)
	Sikh	3 (.0.9%)	1 (0.1%)	4 (0.4%)
	Jewish	1 (0.3%)	8 (1%)	9 (0.8%)
	Muslim	7 (2.1%)	10 (1.3%)	17 (1.5%)
	Buddhist	21 (6.3%)	7 (0.9%)	28 (2.5%)
	Hindu	-	5 (0.6%)	5 (0.5%)
	Other	31 (9.4%)	42 (5.4%)	73 (6.6%)

An a priori power analysis and a sensitivity power analysis were conducted, the former informed the minimum sample size required for this research and the latter indicated what level of effect can be confidently detected with the sample size. A priori power analysis for multiple regression indicated that a sample of 146 would be needed to detect a medium effect size, assuming 95% power and α = 0.05. Using a sensitivity power analysis, assuming 95% power and α = 0.05, the sample of 1111 allowed for detection of small effect sizes corresponding to F^2 = 0.02 (Cohen, 1992; Faul, Erdfelder, Lang & Buchner, 2007, 2009).

The research included only adults and participants assessed whether they met the exclusion criteria (e.g. under 18 years of age or at imminent risk of harm). Therefore the research was open to those that did and did not consider themselves to have had adverse childhood experience, a history of harming themselves or a history of harming others. However, those that did not have a good understanding of English were excluded. In addition, individuals at an immediate and significant risk of harm to themselves or others were advised not to complete the research whilst at heightened risk. Individuals that

began the research questionnaire but did not complete it were only included if they had completed at least two measures. A marginal mean imputation method was used for missing data, with means and intercepts estimated.

Materials

Data was collected through a set of questionnaires and both community and custodial samples completed the same measures. The questionnaire pack included demographic questions as well as questions on adverse childhood experiences, history of harm to self, history of harm to others, shame, and self-compassion. Those in custodial settings were provided with paper copies on the questionnaire pack and the community sample accessed these online through Qualtrics. The following measures were used:

1.   The Maltreatment and Abuse Exposure Scale (MAES, Teicher & Parigger, 2015).
2.   The Indirect Aggression Scale (aggressor version) (IAS, Forrest, et al., 2005).
3.   The Serious Violence against Women/Men Scale (SVAWS/SVAMS, Marshall, 1992a, b)
4.   The Sexual Strategies Scale (SSS, Strang, et al., 2013; Struckman-Johnson, et al., 2003).
5.   The Self Harm Inventory (SHI, Sansone, et al, 1998).
6.   The Compass of Shame Scale (CoSS, Elison, Lennon, & Pulos, 2006).
7.   The Self Compassion Scale (Neff, 2003)

Permission has been gained from the authors of each of these measures to use them in this research both in paper format and online. A summary of alternative measures considered for each variable and details of each measure selected has been provided.

Adverse Childhood Experiences

There are a range of potential self-report measures available to measure ACE. A recent systematic review indicated that 52 separate child abuse measurement instruments have been used within research (Saini, Hoffmann, Pantelis, Everall, & Bousman, 2019). Within this study, four measures, designed to be administered as self-report questionnaires,

were considered. These included Adverse Childhood Experiences (ACE) scale (Felitti, et al., 1998), the Childhood Trauma Questionnaire (CTQ; Bernstien & Fink, 1998), the Childhood Experience of Care and Abuse (CEQA-Q: Bifulco, Bernazzani, Moran, & Jacobs, 2005) and the Maltreatment and Abuse Exposure (MAES) scale (N.B. the MAES is also referred to as the MACE with the addition of chronology of exposure) (Teicher & Parigger, 2015).

Table 2.3: ACE measures

	MAES/MACE	ACE	CTQ	CECA-Q
Number of items	52	10	28	128
Number of abuse types	10	10	5	4
Abuse type subscales	Yes	No	Yes	Yes
Cumulative total score	Yes	Yes	Yes	Yes
No. of strong-moderate COSMIN markers *	4	2	5	1
Free to use in research	Yes	Yes	No	Yes

* Methodological quality assessed by nine COSMIN checklist criteria (Mokkink, et al., 2010) (e.g. internal consistency, reliability, measurement error, content validity etc) (Saini, et al., 2019).

A systematic review of child maltreatment measures (Saini, et al., 2019) established that the strongest measures were the CTQ and the MAES. However, the latter covered a greater range of ACE and did not have cost implications that restricted its use in a largescale research design. The MAES was selected as it presented as a strong measure, that considered a range of ACE, provides a cumulative ACE score and was accessible within the research design.

MAES: The Maltreatment and Abuse Exposure Scale (MAES) (Teicher & Parigger, 2015) was selected. The MAES measures exposure to ten types of maltreatment in childhood. The Maltreatment and Abuse Exposure Scale (MAES) consists of 52 questions that can be used to assess the overall degree of exposure (e.g. total score) and exposure to the 10-

types of abuse. These include sexual abuse (familial and non-familial), parental verbal abuse, parental non-verbal abuse, parental physical maltreatment, witnessing physical abuse between parents, witnessing abuse towards a sibling, peer verbal abuse and ostracism, peer physical bullying, emotional neglect, and physical neglect. Respondents were asked whether they had experienced particular situations within their childhood from particular individuals e.g. parents/other children and were asked to indicate 'yes' or 'no'. For example, have their parents/carers 'threatened to leave or abandon you', 'touched or fondled you in a sexual way', or have other children 'Intentionally pushed, grabbed, shoved, slapped, pinched, punched, or kicked you'. Despite this being a newly developed measure it has acceptable convergent validity correlating with other measures of childhood abuse, such as the Childhood Trauma Questionnaire (CTQ) and the Adverse Childhood Experiences scale (ACE) (Teicher & Parigger, 2015). The MAES also has a good level of test-retest reliability for the total MAES score (r = 0.98) and adequate test-retest reliability across subscales (r = 0.6-0.9), with emotional and physical neglect presenting the lowest levels of temporal reliability (Teicher & Parigger, 2015). The MAES can provide a scaled ACE total score as well as individual ACE subtypes (for detailed scoring methods see Teicher & Parigger, 2015). Despite it being a new measure, the MAES has strengths over other measures in that it considers a greater number of types of adversity that an individual may have experienced in childhood. One minor amendment was made to the measure in relation to which individuals are considered within the measure to have inflicted abuse. This is a reflection of individuals who experience abuse also having periods of time in care/boarding school or spending much of their time in these environments with non-paternal carers. For example, 'household' was changed to 'household/care home/boarding school' and "brother, sister, stepsiblings" changed to "brother, sister, stepsiblings, other children you shared care homes/boarding schools with". The internal consistency of this measure within the current sample is presented in Table 2.4. This scale measures historical ACE.

Harm to self measure

A systematic review of instruments designed to measure self-harming behaviours in adults (Borschmann, Hogg, Phillips, & Moran, 2012) found that previous research had used 49 different measures, however, only a proportion were self-report questionnaires

with evidence of adequate psychometric properties. The four strongest measures reviewed were considered to have comparable psychometric properties.

Table 2.4: Harm to self measures

	SHI	DSHI	SHBQ	SIQ
Number of items	22	17	22	30
Number self-harming behaviours	22	17	4	4
Easy to self-administer*	Yes	No	No	No
Applicability to sample	Yes	Yes	Yes	Yes
Lifetime prevalence	Yes	Yes	Yes	Yes
Data gathered that not required *(e.g. function, duration etc)*	No	Yes	Yes	Yes
Free to use in research	Yes	Yes	Yes	Yes

* needs to be clear accessible and distinct questions that are easy to answer and do not need any further direction; SHI = Self Harm Inventory (Sansone, Wiederman, & Sansone, 1998); DSHI = Deliberate Self-Harm Inventory (Gratz, 2001); SHBQ = Self Harm Behaviour Questionnaire (Guttierez, Osman, Barrios, & Kopper, 2001); SIQ = Self Injury Questionnaire (Santa Mina, Gallop, Links, Heslegrave, Pringle, Wekerle, & Grewal, 2006).

The selection of the measure of self-harm in this study was undertaken by ensuring it was a measure with adequate psychometric properties that was focussed on lifetime prevalence of self-harming behaviours and was easy to self-administer. The selected measure was also considered to be accessible to clinical, community and forensic populations and included a range of behaviours, including those that may be gender specific. The Self Harm Inventory (SHI; Sansone, Wiederman, & Sansone, 1998) was considered to meet these requirements.

SHI: The Self Harm Inventory (SHI) (Sansone, Wiederman, & Sansone, 1998) was selected. The SHI (Sansone, et al, 1998) is a 22-item measure that explores a range of self-harming behaviours on a dichotomous scale. For example, have they ever intentionally or on purpose: 'overdosed', 'burned yourself on purpose', or 'cut yourself on purpose'. The SHI

is a validated measure of self-harm (Borschmann, Hogg, Phillips & Moran, 2012) which has demonstrated adequate internal consistency, ranging from 0.80 to 0.90 (Sansone, Butler, Dakroub, & Pole, 2006; Sansone, Reddington, Sky, & Wiederman, 2007; Sansone, Songer, & Sellbom, 2006), and convergent validity (Sansone, Wiederman, & Sansone, 1998). The SHI also showed adequate fit to the Rasch model indicating unidimensionality and was considered applicable to clinical and non-clinical populations (Latimer, Covic, Cumming & Tennant, 2009). This validated measure was selected as it considers a wide range of self-harming behaviours and therefore is less likely to result in a false negative being recorded. The internal consistency of this measure within the current sample is presented in Table 2.4. This scale measures present and historical evidence of self-harming behaviours.

Harm to others measures

For the purpose of this research harm to others is defined as physical, sexual or psychological damage or injury inflicted on another person. This information was gathered using a number of scales and subscales. All measures were selected because they focussed on behaviours rather than attitudes, which may or may not result in harmful behaviours inflicted on others. All three harm towards others scales measure current and historical aspects of harm inflicted on others.

Measures of harm to others are more limited within previous research, with the majority tending to focus on the emotions, cognitions and personality traits underlying harmful behaviours towards others (e.g. aggression, sexual interests, sexual preoccupation, anger, impulsivity etc), which may not translate into actual harmful behaviours, rather than measuring the presence and frequency of harmful behaviours. Similarly, the majority of instruments measure harmful behaviour from the perspective of the victim and not harmful behaviour committed by themselves. The potential options are reduced further when the focus is on adult behaviours, as opposed to children/adolescents, include behaviours not focussed solely on one gender, are relevant beyond family and romantic relationships, and are formatted as self-report questionnaires accessible to clinical, community and forensic populations. In order to capture psychological and physical harm

towards others. Given the limited options two different measures were selected, the Serious Violence Against Women / Men (SVAW/M; Marshall, 1992a, b) scale and the "aggressor version" of the Indirect Aggression Scale (IAS, Forrest, et al., 2005), to cover both psychological and physical harm in the manner required for this research. Both measures had adequate psychometric properties and good face validity (Anguiano-Carrasco & Vigil-Colet, 2011; Basu, Levendosky, & Lonstein, 2013; Forrest, et al., 2005; Gilroy, McFarlane, Maddoux, & Sullivan, 2016; Marshall, 1992a, 1992b; Temple, Weston, & Marshall, 2010; Thompson, Basile, Hertz, & Sitterle, 2006). Overall, these combined measures presented as a robust measure appropriate for this study.

IAS-revised: In order to capture harm psychologically harmful behaviours the Indirect Aggression Scale (aggressor version) (Forrest, Eatough, & Shevlin, 2005) was selected. This measure contains 25 items to measure indirect aggression in an adult population. The 25 items were identified through an exploratory factor analysis to be representative of three factors: social exclusionary behaviours (ten items), malicious humour (nine items), and guilt induction (six items). Items included asking how often they tended to behave in certain ways. For example, 'used sarcasm to insult someone', 'criticised them in public', 'called someone names' and 'excluded someone from a group' etc. The IAS has adequate psychometric properties with internal consistency demonstrated across all three factors of the measure (Cronbach α 0.81-0.84) (Forrest, et al., 2005). The Spanish version of the IAS also demonstrated convergent validity with direct aggression and impulsivity measures, however, a one-dimensional total score gained greater support than the three-factor model (Anguiano-Carrasco & Vigil-Colet, 2011). Warren and Clarbour (2009) found floor effects with the original IAS measure due to it being time specific and they found improvements in the scale when time restraints were removed within the responses. The Likert scale was maintained but participants, similar to within Warren and Clarbour's (2005) research, were asked how characteristic a behaviour was of them instead of how many times they did the behaviour in a 12 month period. Additionally, the terminology in the measure used in this study was simplified for accessibility, with participants asked how often they tended to behave in each of the ways specified (0 = never, 1 = rarely, 3 = on occasion, 4 = often, 5 = very often). The IAS was selected as a valid measure focussed

on a wide range of indirect aggressive behaviours. The internal consistency of this measure within the current sample is presented in Table 2.4.

SVAMS/SVAWS- revised to SVAOS: The Severity of Violence Against Women Scale (SVAWS) and Severity of Violence Against Men Scale (SVAMS) (Marshal, 1992a; 1992b) contain 46 items each. These items can reflect violence committed against the self from others or violence committed towards others, with a small change in focus and vocabulary. The items were only used in relation to violence committed against others. Although there are two measures reflective of the gender of the respondent, the items are consistent across both measures (e.g. SVAWS; SVAMS) with differences solely in relation to which subscale or overarching dimensions they load on to (e.g. severity of violence/threats or actual violence). Only the total scale score was used and therefore these discrepancies became immaterial. considered For ease of reference the measure will be referred to as the Severity of Violence Against Others Scale (SVAOS). The SVAOS items cover threats of mild, moderate, and serious violence; actual mild, minor, moderate, and serious violence; and sexual violence. Second-order factor analysis indicated two broader dimensions, physically threatening acts and actual violence (Marshall, 1992). It is considered a comprehensive measure due to its ability to distinguish between the levels of severity of physical violence (minor, mild, moderate, serious) and it's sensitivity (Temple, Weston, & Marshall, 2010). The measure has adequate construct validity (Marshall, 1992a, 1992b; Thompson, Basile, Hertz, & Sitterle, 2006) and internal consistency, with total scores ranging from Cronbach α = 0.89 – 0.98 (Basu, Levendosky, & Lonstein, 2013; Gilroy, McFarlane, Maddoux, & Sullivan, 2016; Marshall, 1992a, 1992b). Although the measure was designed to measure violence in relationships the behaviours are reflective of general interpersonal violence and therefore applicable to violence committed towards others outside of dating relationships. Therefore the items were adapted slightly by changing the word 'partner' to 'someone'. The items have face validity for general interpersonal violence. The sexual aggression items were also removed (6 items) due to using another questionnaire to measure sexual violence, this left 40 items reflecting threats of violence and actual violence. Marshall (1992) has used a range of Likert scales and also various timescales. However, reflecting on the findings of the IAS measure by Warren and Clarbour (2005) and the similar structure of this measure to the

IAS the scale was adapted as to not restrict answers to set timescales and instead to consider how characteristic the behaviour is of them. However, the term characteristic was considered too complex and to improve accessibility the 5 point Likert scale was rated in terms of how often they tended to behave in each of the ways (0 = never, 1 = rarely, 3 = on occasion, 4 = often, 5 = very often). A total score was gained. The internal consistency of this measure within the current sample is presented in Table 2.4.

Combined measure (IAS/SVAOS): For the purpose of this research both the IAS and the SVAOS measures were combined to capture an overall measure of psychological and physical harm. This combined measure had adequate levels of internal consistency (see table 2.4).

Difficulties finding appropriate measures of sexual harm towards others was even greater, with the same issues relevant to psychological and physical harm measures and very few measures available for consideration. Additional consideration was taken as to the way that this measure presented the questions (e.g. the language used) in order to reduce resistance to completing this measure. Two potential measures were considered; the Sexual Experiences Survey (SES: Koss, Gidycz, & Wisniewski, 1987; Koss, et al., 2006, 2007) and the Sexual Strategies Scale (Strang, Peterson, Hill, & Heiman, 2013; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003). Both measures are considered to have adequate psychometric properties and have good face validity (Testa, Hoffman, Lucke, & Pagnan, 2015). However, research that compared each of these measures assessed the SSS as the preferred measure due to it's better Rasch properties, better assessment of the less severe tactics, and simpler wording (Testa, et al., 2015). The SSS was therefore selected as the better measure. However, some concerns are recognised in terms of this measures applicability to both a community sample and a sample of individuals convicted for sexual offences. Selecting a measure that is accessible to community samples may use language designed to increase accessibility but in turn may reduce it's applicability to those that have committed sexual offences that may not necessarily be captured by the terminology used in this measure (e.g. using tactics to facilitate sexual contact when aware the other person did not want to, because they said no or appeared uninterested).

For example, this may not capture individuals that engage in internet-based sexual offences, voyeurism or exhibitionism).

SSS: In order to capture the harm towards other in the form of sexual harm the Sexual Strategies Scale (SSS) (Strang, Peterson, Hill, & Heiman, 2013; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003) was selected. This measure contains 22 items which ask participants what strategies they have used to gain sex when the other person does not want to. It asks ''In the past, which if any of the following strategies have you used to convince a woman to have sex (oral, anal, or vaginal intercourse) after she initially said 'no', or did not seem interested?'' The scale asks whether participants have used any of the 22 tactics listed. For example, 'Using your older age to convince them', 'Asking them repeatedly to have sex', 'Using physical restraint', and 'Harming them physically'. The five levels of strategies, which increase in severity, included the following: use of enticement (3 items), verbal coercion/emotional manipulation (8 items), use of older age or authority (2 items), use of intoxication (3 items), and threats or force (6 items). A total score is gained. For the purpose of this research, the wording was amended slightly to remove the focus on the female gender as the victim. Instead of using the words 'woman' and 'her' they were changed to gender-neutral terminology such as 'someone' and 'they'. The measure has adequate internal consistency (Cronbach $\alpha = 0.79$) and Rasch properties with satisfactory global goodness of fit as a unidimensional measure (Testa, Hoffman, Lucke, & Pagnan, 2015). The measures applicability to both male and females has content and face validity as the measure was based on themes identified from research that explored both male and female sexually coercive behaviours (Struckman-Johnson, et al., 2003). This measure was selected as it was one of the only measures to explore sexually inappropriate behaviours, rather than attitudes, that could be accessible to individuals in the community as well as individuals in custody for sexual offences. The other alternative was the Sexual Experiences Survey (Abbey, Parkhill, Clinton-Sherrod, & Zawacki, 2007) measure, however, the SSS is considered to be a better measure and uses less complex language increasing its accessibility over the SES (Testa, Hoffman, Lucke, & Pagnan, 2015). The internal consistency of this measure within the current sample is presented in Table 2.4.

Shame measure

The complex nature of shame and its measurement has been presented throughout this thesis and it may be this complexity that has resulted in a wide range of measures being referenced through the literature. A recent systematic review of papers exploring the relationship between shame and substance use identified over 20 separate measures of shame (Luoma, Chwyl, & Kaplan, 2019). However, only a proportion of measures were considered to potentially meet criteria for use within this study. Only self-report questionnaires that measured global internalised shame and had shame as the primary focus of the assessment were considered. This is because measures that focus on only one specific aspect of the self (e.g. being overweight, illness) or a behaviour (e.g. eating habits, drinking habits, offending behaviours) can create additional measurement issues with potential overlap between other related concepts, such as guilt, stigma. Additionally, measures that capture a combination of affective, cognitive and behavioural elements of shame are likely the most robust measures, as all aspects are relevant and cannot be assumed to be interchangeable (Mauss & Robinson, 2009).

Alongside shame measures being evaluated based on their ability to measure the multidimensional nature of shame (e.g. affect, cognition, interpersonal, behaviour) and different behavioural manifestations of shame, they have also been categorised by the type of scale used and whether they would be considered as a state or trait measure of shame. A "state" is considered transitory, brief and dependent on a specific external circumstance (e.g. shame in the moment); a "trait" is considered habitual, pervasive, and dependent on individuals internalised interpretation of themselves and the world around them (e.g. chronic shame internalised as part of one's identity) (Chaplin, John & Goldberg, 1988). The reference to external circumstance can often lead to measures that refer to scenarios being referred to as state measures. However, measures that capture a range of scenario's that can evoke a shame response and assesses how an individual would 'generally' respond to those situations is more likely to capture shame as a trait-based experience.

Both state and trait measures have value within shame research as well as limitations. State measures could help to establish whether shame triggered in the moment is related to other immediate psychological sequalae providing greater support for causality. As they are in the moment, state measures of shame are considered less vulnerable to memory biases (Robinson & Clore, 2002) and potentially more accurate assessments of emotion. However, real-time or close-in-time measures of shame are difficult to use in large scale cross-sectional research designs. Trait measures are based on the assumption that shame is a stable trait and will trigger in similar situations and in similar ways and this can be a specific interest to researchers looking at longer-term psychological sequelae (e.g. mental health issues etc), such as within this study. Past research has considered that despite the benefits of state-based measures traits are stronger predictors of future behaviours and decisions (Safer, Levine, & Drapalski, 2002; Wilson & Gilbert, 2005), more appropriate for cross-sectional studies, and particularly those that require large sample sizes. However, trait measures are vulnerable to memory biases and socially desirable responding (Robinson & Clore, 2002). Although there are benefits as well as limitations to both state and trait measures of shame, it is recommended that the measure is selected based on the specific research question (Conner & Barrett, 2012). This research is focussed on predicting future behaviours, is a large-scale research project, cross-sectional in nature and therefore a trait-based measure would be the most appropriate.

Shame measures can be inappropriately identified as state measures based on the style of the scale used rather than having an in-depth consideration of what the measure actually captures. Shame measure styles can generally be described as falling within four different categories: situation-based scales, scenario-based scales, statement-based scales, and adjective-based scales (Robins, Noftle, & Tracy, 2007). Assumptions can be made that situation and scenario-based measures are state measures, as they ask about shame linked to specific situations. However, the format and time-specific nature of these scales are more likely to influence whether they are measuring state or trait shame. For example, measures such as the TOSCA and CoSS, which are scenario-based, are often mistaken for state-based measures, however, closer inspection of these measures

indicates that they are more likely trait-based measures of shame. Schalkwijk and colleagues (2016) describe the CoSS as a trait measure as it is used "to assess preferred emotional reaction patterns to shameful experiences that have developed over time and, thus, they may be assumed to be firmly established". It is acknowledged that there has been disagreement within past literature as to whether a number of shame measures are assessing state or trait shame. However, there appears a greater level of consensus amongst researchers in recent years, with the majority of identified shame measures classified as trait shame measures (Robins, Noftle, & Tracy, 2007) and the selection of a shame measure for this research are generally in line with this. The large cross-sectional research design and aims of the current research requires a trait-based measure of shame.

A number of shame measures were considered in the development of this research, however, only a small number of global internalised shame measures that measured shame as a trait, captured more than one element of shame (e.g. cognitive, affective, behavioural) and had adequate psychometric properties were considered potentially appropriate within this study design. These three key measures were considered in greater depth for their suitability for this research and in particular the ability of the measure to capture the multifaceted behavioural manifestations of shame (e.g. withdrawal, attack etc). See table 2.5.

Table 2.5: Shame measures

	Compass of Shame Scale (CoSS)	Test of Self-Conscious Affect (TOSCA-3)	Internalised Shame Scale (ISS)
Measurement style	Scenario	Scenario	Statement
Response style	Likert (1-5)	Likert (1-5)	Likert (0-4)
Captures affective element	+	+	+
Captures cognitive element	+	+	+
Captures behavioural element	+	+	-
No. of distinct manifestations of shame measured	4	1*	1

	Shame attack self	Shame proneness	Internalised shame
Factor 1	Shame attack self	Shame proneness	Internalised shame
Factor 2	Shame withdrawal	-	-
Factor 3	Shame attack other	-	-
Factor 4	Shame avoidance	-	-
Relationship to other shame measures	Attack self – ISS (.71) ** Withdrawal – ISS (.72) ** Attack other – ISS (.31) ** Avoidance - ISS (.16) **	TOSCA – ISS (.56) ***	
Use with adults	+	+	+
Free to use in research	Yes	Yes	No

*CoSS (Elison, Lennon, & Pulos, 2006); TOSCA (Tangney, Wagner & Gramzow, 1989); ISS (Cook, 1994, 2001); * the externalisation and detachment subscales are distinct from the shame subscale; ** (Elison, Lennon, & Pulos, 2006); ***(Luoma, Guinther, Potter, & Cheslock, 2017)*

Practitioner experience and previous research studies have highlighted the importance of a measure having clinical face validity as well as adequate psychometric qualities. The CoSS measure has presented as a robust measure that can capture the multidimensional and multifaceted nature of shame. Currently, only the Compass of Shame Scale recognises, and has the potential to capture, the multifaceted manifestations of shame.

CoSS: The Compass of Shame Scale (CoSS) (Elison, Lennon, & Pulos, 2006) was used. The Compass of Shame Scale (CoSS) (Elison, et al., 2006) includes 12 scenarios that evoke shame (e.g. as affect, cognition and/or behaviour). They are based upon Nathanson's eight classifications of situations which are shaming (Nathanson, 1987). Each scenario is followed by four possible reactions (see figure 2.5) to the scenario based on the four ways an individual may connect with shame (e.g. withdrawal, avoidance, attack self, attack other). Participants are asked how frequently they might react in that way on a 5 point Likert scale ranging from 0 = Never to 4 = Almost Always. For example, a scenario might say "When I feel rejected by someone", and the responses that follow would include "I avoid them", "I soothe myself with distractions", "I brood over my flaws", and "I get angry with them". Four subscale scores are gained: withdrawal, avoidance, attack self, and attack other. The measure has convergent validity (Campbell & Elison, 2005; Elison, Lennon, Pulos 2006) and temporal stability, with reliability coefficients for each of the

four subscales ranging from .81 to .92 (Elison, Pulos, & Lennon, 2006). The four subscales of the CoSS also have internal consistency, with the internal consistency of the four subscales ranging from Cronbach α 0.68-0.95 (Dyer, et al., 2017; Elison, Lennon, & Pulos, 2006; Reid, Harper & Anderson, 2009). The CoSS measure was selected due to its ability to measure shame as a multidimensional concept and therefore it is considered superior to other measures. For example, the Withdrawal and Attack Self subscales highly correlate with the Internalised Shame Scale (ISS: Cook, 1987; 1994; 2001) (Elison, et al., 2006) indicating that these two subscales are measuring the same aspects of shame. These two subscales have also been considered to represent the internalisation of shame whereas the other two subscales the externalisation of shame (Schalkwijk, et al., 2016). Therefore, the CoSS provides two additional aspects of shame beyond that assessed by the other measures of shame, such as the ISS, and what have been considered as externalised representations of shame. The internal consistency of this measure within the current sample is presented in Table 2.4. This scale measures current experiences of shame.

Figure 2.5: The Compass of Shame
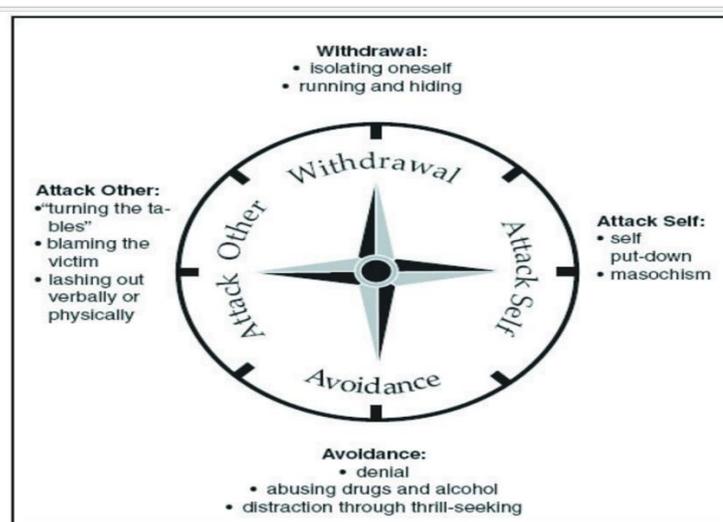
Self-compassion measure

Although there is a wide range of shame measures available this is not the case for measures of self-compassion. Three potential measures were considered. The 'expressing kindness and compassion towards yourself' subscale of the Fears of Compassion Scale

(Gilbert, et al, 2012) and both the Self-Compassion Scale (SCS; Neff, 2003) and its short form version (SCS-SF; Raes, Pommier, Neff, & Van Gucht, 2011). Although Fears of Compassion scale is promising it is a relatively new assessment and only one subscale would be applicable to the current research focus. In addition, the measure captures a subtly different concept of self-compassion to the concept of self-compassion used within this research (e.g. Neff 2003, 2011). Although the SCS is the most frequently used measure of self-compassion the SCS has received criticism for capturing both self-compassion and self-criticism and therefore it is recommended that only the items that are specifically focused on a self-compassionate attitude should be used (Costa, et al., 2015). The SCS-SF version also includes items that measure both concepts and therefore the criticism of the SCS also impacts on the SCS-SF. In order to measure Neff's conceptualisation of self-compassion and solely capture self-compassion the self-compassionate attitude subscale of the SCS was selected as the most appropriate measure for this research.

SCS – self-compassionate attitude subscale: The Self Compassion Scale (SCS) (Neff, 2003) was used to measure self-compassion as it is the most frequently used measure of self-compassion with adequate psychometric properties. Self-compassion involves mindfully recognising our own suffering, our common humanity and being kind to ourselves (Neff, 2011). Although a six-factor model was initially postulated, stronger support has been given to a two factor model within the SCS with a positive dimension reflecting a self-compassionate attitude and a negative dimension reflecting a self-critical scale (Costa, Maroco, Pint-Gouveia, Ferreira & Castilho, 2015). Of the 26 items of the SCS, thirteen items reflect the self-compassionate attitude factor and as such only these items were selected. These items ask the respondent how frequently they act in certain ways towards themselves. For example, 'I'm kind to myself when I'm experiencing suffering', 'I'm tolerant of my own flaws and inadequacies' and 'I try to be loving towards myself when I'm feeling emotional pain'. Responses are given on a 5 point Likert scale from "1 = Almost Never" to "5 = Almost Always." The SCS self-compassionate attitude subscale demonstrated adequate internal consistency (Cronbach α= 0.91), the analysis of the Average Variance Extracted (AVE) showed evidence of convergent validity (0.65) and

discriminant validity was assumed as the AVE values were greater than $r^2 = 0.28$ (Costa et al, 2015). The internal consistency of this measure within the current sample is presented in Table 2.4. This scale measures current experiences of self-compassion.

Procedure

Two data collection protocols were developed and administered. One for custodial settings and one for community settings.

Within custodial settings (protocol A) permission was gained to access five prison establishments, within the UK. The information and consent form was provided to all residents with a return envelope. Those individuals that returned their completed consent forms were sent a blank research survey, which contained no identifying information, and a self-addressed return envelope was provided. Individuals were advised to keep the debrief sheet which reminded them of support available. Participants then returned their completed questionnaires anonymously.

Within community settings (protocol B) an electronic version of the information sheet, consent form, survey and debrief sheet was created using Qualtrics® (Qualtrics, Provo, UT, USA). This was accessed online. Participants needed to consent to the research prior to accessing the survey. Links to this research survey were advertised in a number of locations in order to distribute this within a range of community-based populations. These included Facebook and Facebook pages (e.g. Personality Disorder Awareness), Linkedin, Twitter, Nottingham Trent University psychology research participation scheme and Listservs. In addition, the research was advertised on a number of forums which allowed links to the research, with permission from the forum moderators. These forums included National Self Harm Network (NSHN), Help for Adult Victims of Child Abuse (HAVOCA), Social Anxiety UK (SAUK), the Angry Forum, My PTSD, Prison talk, AADD-UK (adults with ADHD), Military forum, Psychlink, and HealthUnlocked.

The same measures were used in each of the settings and are summarised in table 2.6. With the current sample, all measures demonstrated adequate levels of internal consistency.

Table 2.6: Summary of Measures and Internal Consistency of Scales

Theme measured	Psychometric Measures	Subscale	Internal consistency (Cronbach's α)					
			ALL N=1111	**M** n = 497	**F** n = 540	**NB** n = 18	**C** n = 397	**NC** N = 672
Adverse Childhood Experiences (ACE)	The Maltreatment and Abuse Exposure Scale (MAES)	*Total*	.94	.95	.94	.94	.95	.94
Shame	Compass of Shame Scale (CoSS)	*Withdrawal*	.92	.91	.89	.87	.91	.92
		Avoidance	.72	.77	.67	.51	.80	.64
		Attack Self	.95	.93	.94	.91	.94	.95
		Attack Other	.91	.92	.88	.83	.92	.89
Self-compassion	Self-Compassion Scale (SCS)	*Self-compassion subscale*	.95	.95	.95	.90	.95	.95
Harm to others: Psychological and Physical Aggression	Indirect Aggression Scale (IAS)	*IAS total*	.95	.96	.94	.91	.96	.93
	Serious Violence Towards Others Scale (SVAOS)	*SVAOS total*	.97	.98	.96	.97	.98	.94

			ALL	M	F	NB	C	NC
IAS and SVAOS combined		*Combined total*	.98	.98	.97	.97	.98	.95
Harm to Others: Sexual Harm	Sexual Strategies Scale (SSS)	*SSS Total*	.86	.87	.79	.93	.88	.78
Harm to Self	Self-Harm Inventory (SHI)	Total	.90	.90	.89	.72	.91	.90

ALL= full sample (n= 1111), M = male sample (n = 497), F = female sample (n = 540), NB = non-binary (18), C = sample with convictions (n = 397), NC = sample with no-convictions (n = 672).

Method of Analysis

A mediation analysis was undertaken to establish the mediating influence of Shame and Self-Compassion on the relationship between experiences of childhood adversity and later harm to self and others.

Ethical Considerations

This research explored several sensitive topics which could evoke negative emotions. Topics including adverse childhood experiences, harm inflicted on the self, harm inflicted on others, and experiences of shame were all considered sensitive areas to explore. Despite concerns, previous studies indicate that there can be positive benefits to participants engaging in this type of research. For example, being asked about suicidal ideation reduces risk rather than increases it (Mathias, Furr, Sheftall, Hill-Kapturczak, Crum, & Dougherty, 2013; Dazzi, Gribble, Wessely & Fear, 2014), only a minority of participants report being upset about sensitive of questions (Finkelhor, Vanderminden, Turner, Hamby, & Shattuck, 2014) and those that do experience upset also report participation in this type of research as being helpful (Decker, Naugle, Carter-Visscher, Bell, & Seifert, 2011). Additionally, a systematic review of 30 papers which asked about experiences of abuse through surveys highlighted that the participants considered the

benefits of participating in this type of research outweighed the costs and they did not regret participating (McClinton-Appollis, Lund, de Vries, & Mathews, 2015). Despite this, the research was designed to reduce any potential risks associated with engaging in this research. Firstly, there is no form of deception used within the research and participants were fully informed before deciding if they wanted to participate. They were made aware of the sensitive nature of the questions and that their own safety and the safety of others was priority. They were advised to not complete the questionnaires if they thought it would result in harm to themselves or others. Appropriate links to support were also made in the information and debrief sheets. Support links were appropriate to the environment with support links accessible to the custodial sample presented in only the paper-based documentation and support links accessible in the community presented in the online documentation.

Consideration was also made as to whether the researcher would need to disclose any increased risk of self-harm, suicide or harm to others. However, it was noted that the information was retrospective and therefore not reflective of current risk and there would unlikely be the required detail within a completed questionnaire to warrant the information being passed to the authorities. The research was also anonymous and therefore the researcher would not be able to identify which completed questionnaire belonged with which participant. Therefore, there would be no responsibility for the researcher to disclose any content within the research.

Participants within custodial settings can be considered vulnerable due to the potential power imbalance between the researcher and prisoner. Although those in custody can feel pressured to participate the research was designed to reduce this possible issue. The information sheet and consent form stated that consenting to the research was voluntary, that there would be no consequences if they chose to participate or not and that they could withdraw their participation up to a certain point. In order to evaluate the accessibility, ethical implications and sensitivity of the research within a custodial sample, a service user group, which included several serving prisoners from varied backgrounds,

were consulted. Feedback received was positive, they considered the research of value, that its voluntary basis was clear and did not consider the questions to be too sensitive to explore. One service user highlighted that he was encouraged to see that these areas were being looked at within research.

Ethical approval was gained for this research from the National Research Committee within Her Majesty's Prison and Probation Service (HMPPS) and the Nottingham Trent University College of Business, Law and Social Sciences Research Ethics Committee.

The models included a maximum of nine observed variables. These included ACE, shame (attack self; attack other; withdraw; avoidance), self-compassion, self-harm, and harm to others (sexual harm; physical and sexual harm). Although participants were gained from both a custodial and community sample, a number of community participants (n = 66) disclosed having had at least one conviction. Therefore, the sample was split into those with and those without convictions in order to explore differences in the data. It is noted that there was no real difference in the patterns presented in table 2.7 than presented in the differences between custodial and community samples.

Table 2.7: Means, standard deviations for total sample (n = 1111) and t-test differences and effect sizes between participants with and without convictions

	Total sample	No convictions (n= 672)	Any conviction (n= 397)	P	Hedges g effect
Shame avoidance	M = 22, SD = 6.85 Range: 0-44	M = 21.95, SD = 5.90 Range: 5-40	M = 22.03, SD = 8.32 Range: 0-44	.858	0.01
Shame attack self	M = 29.55, SD = 12.04 Range: 0-48	*M = 31.76,* *SD = 11.26* *Range: 0-48*	M = 25.53, SD = 12.33 Range: 0-48	.001	0.53
Shame withdrawal	M = 27.77, SD = 10.89 Range: 0-48	*M = 29.49,* *SD = 10.16* *Range: 0-48*	M = 24.64, SD = 11.48 Range: 0-48	.001	0.45
Shame attack other	M = 15.76, SD = 9.57 Range: 0-48	*M = 16.47,* *SD = 8.92* *Range: 0-47*	M = 14.23, SD = 10.40 Range: 0-48	.001	0.24
Self-compassion	M = 32.19, SD = 14.96 Range 0-65	M = 32.36, SD = 13.51 Range: 0-65	*M = 35.49,* *SD = 14.05* *Range 0-65*	.001	0.23

Total ACE	M = 37.60,	M = 34.67,	*M = 42.81,*	.001	0.37
	SD = 22.44	SD = 20.89	*SD = 24.08*		
	Range: 0-97	Range: 0-97	*Range: 0-95*		
Self-harm	M = 8.15,	M = 8.17,	M = 8.45,	.447	0.05
	SD = 5.86	SD = 5.67	SD = 6.09		
	Range: 0-22	Range: 0-21	Range: 0-22		
Psychological and physical harm others	M = 41.78,	M = 33.30,	*M = 59.58,*	.001	0.76
	SD = 36.72	SD = 24.58	*SD = 46.47*		
	Range: 0-240	Range: 0-137	*Range: 0-240*		
Sexual harm others	M = 1.3,	M = .84,	*M = 2.22,*	.001	0.56
	SD = 2.51	SD = 1.70	*SD = 3.38*		
	Range: 0-22	Range: 0-12	*Range: 0-22*		

Those with and without convictions presented with similar levels of shame avoidance and self-harm ($p > .05$) whilst there were significant differences on the remaining variables ($p < .001$), with small to large effect sizes observed. Those without convictions presented with greater levels of 'shame attack self' and 'shame withdrawal', with moderate effect sizes, and slightly more 'shame attack other' than those with convictions, with a small effect size. Those with convictions presented with higher levels of physical, psychological and sexual harm towards others, presenting with a large effect size, when compared to the sample with no convictions. The sample with convictions had significantly higher levels of ACE, however, the effect size was small. Finally, the sample with convictions also presented with higher levels of self-compassion than the sample without convictions.

Table 2.8: Means, standard deviations for total, conviction and no conviction samples and ANOVA differences and effect sizes between gender types

		Male	Female	Non-binary	P	Eta squared effect size η^2
Shame avoidance	All	M = 22.18, SD = 7.59 Range: 0-44	M = 21.84, SD = 6.25 Range: 0-41	M = 21.28, SD = 5.38 Range: 11-29	0.66	.001
	No convictions	M = 27.70, SD = 5.76 Range: 8-37	M = 21.68, SD = 5.88 Range: 5-40	M = 20.64, SD = 5.53 Range: 11-29	.095	.007
	Convictions	M = 21.84, SD = 8.45 Range: 0-44	M = 22.76, SD = 8.00 Range: 0-41	M = 23.50, SD = 4.80 Range: 19-29	.639	.002
Shame attack self	All	M = 23.82, SD = 11.53 Range: 0-48	**M = 34.32, SD = 10.21 Range: 0-48**	**M = 35.22, SD = 8.86 Range: 16-47**	.001	.191
	No convictions	M = 24.39, SD = 10.90 Range: 0-48	**M = 34.52, SD = 10.05 Range: 0-48**	**M = 38.79, SD = 6.00 Range: 26-47**	.001	.171
	Convictions	M = 23.49, SD = 11.87 Range: 0-48	**M = 33.20, SD = 11.13 Range: 2-48**	M = 22.75, SD = 4.72 Range: 16-26	.001	.101
Shame withdrawal	All	M = 22.93, SD = 10.96 Range: 0-48	**M = 31.83, SD = 9.03 Range: 0-48**	**M = 33.28, SD = 7.45 Range: 18-46**	.001	.168
	No convictions	M = 22.58, SD = 10.06 Range: 0-45	**M = 32.08, SD = 8.85 Range: 0-48**	**M = 36.14, SD = 5.20 Range: 30-46**	.001	.185
	Convictions	M = 23.14, SD = 11.48 Range: 0-48	**M = 30.39, SD = 9.95 Range: 6-48**	M = 23.25, SD = 4.99 Range: 18-30	.001	.064
Shame attack other	All	M = 13.84, SD = 9.89 Range: 0-48	**M = 17.12, SD = 8.91 Range: 0-47**	**M = 16.44, SD = 7.07 Range: 5-29**	.001	.030

	No convictions	M = 14.88, SD = 8.94, Range: 0-41	**M = 17.03, SD = 8.80, Range: 0-47**	M = 15.29, SD = 7.54, Range: 5-29	.017	.012
	Convictions	M = 13.18, SD = 10.38, Range: 0-48	**M = 17.61, SD = 9.78, Range: 0-45**	**M = 20.50, SD = 2.89, Range: 17-24**	.001	.033
Self-compassion	All	**M = 37.71, SD = 13.62, Range 0-65**	M = 30.36, SD = 12.34, Range: 0-65	M = 30.72, SD = 9.46, Range: 13-50	.001	.075
	No convictions	**M = 38.26, SD = 13.11, Range: 0-65**	M = 30.80, SD = 12.25, Range: 0-65	M = 29.14, SD = 9.20, Range: 13-46	.001	.069
	Convictions	**M = 37.62, SD = 13.63, Range: 0-65**	M = 27.81, SD = 12.61, Range: 0-65	**M = 36.25, SD = 9.36, Range: 29-50**	.001	.080
Total ACE	All	M = 35.70, SD = 23.22, Range: 0-90	**M = 39.07, SD = 21.71, Range: 0-97**	**M = 44.33, SD = 21.67, Range: 13-79**	0.02	.007
	No convictions	M = 26.96, SD = 18.02, Range: 0-88	**M = 37.43, SD = 21.21, Range: 0-97**	**M = 40.07, SD = 21.30, Range: 13-73**	.001	.052
	Convictions	M = 41.06, SD = 24.40, Range: 0-90	**M = 48.50, SD = 22.29, Range: 2-95**	**M = 59.25, SD = 17.75, Range: 36-79**	.019	.020
Self-harm	All	M = 6.33, SD = 5.47, Range: 0-22	**M = 9.82, SD = 5.62, Range: 0-22**	**M = 12.67, SD = 3.69, Range: 8-19**	.001	.099
	No convictions	M = 4.38, SD = 4.10, Range: 0-20	**M = 9.49, SD = 5.51, Range: 0-21**	**M = 13.07, SD = 3.65, Range: 8-19**	.001	.180
	Convictions	M = 7.52, SD = 5.84, Range: 0-22	**M = 11.71, SD = 5.86, Range: 0-22**	**M = 11.25, SD = 4.03, Range: 8-17**	.001	.079

Psychological and physical harm others	All	**M = 50.78, SD = 42.40 Range: 0-240**	M = 36.21, SD = 29.38 Range: 0-177	M = 38.33, SD = 31.22 Range: 5-126	0.01	.039
	No convictions	**M = 37.10, SD = 25.25 Range: 0-137**	M = 31.88, SD = 24.37 Range: 0-136	M = 30.36, SD = 23.27 Range: 5-82	.047	.009
	Convictions	M = 59.20, SD = 47.98 Range: 0-240	M = 61.11, SD = 41.24 Range: 0-177	M = 66.25, SD = 42.90 Range: 27-126	.911	.001
Sexual harm others	All	**M = 1.85, SD = 3.04 Range: 0-22**	M = .86, SD = 1.77 Range: 0-12	**M = 2.06, SD = 4.02 Range: 0-15**	.001	.038
	No convictions	**M = 1.05, SD = 1.90 Range: 0-10**	M = 0.77, SD = 1.63 Range: 0-12	M = 0.50, SD = 1.35 Range: 0-5	.013	.007
	Convictions	**M = 2.32, SD = 3.47 Range: 0-22**	M = 1.44, SD = 2.38 Range: 0-10	M = 7.50, SD = 5.76 Range: 1-15	.001	.037

Total males (n =497), males with no convictions (n = 184), males with convictions (n =311); Total females (n = 540), females with no convictions (n = 460), females with convictions (n = 80); Total non-binary (n = 18), non-convicted non-binary (n = 4), convicted non-binary (n = 14).

Gender differences presented across the measures with significant but small effect sizes (table 2.8). However, there was a medium effect size between gender within the full sample on the shame self-attack and shame withdrawal measures with non-binary and female samples demonstrating higher levels than males. There was also a medium effect size between gender within the sample of participants that had not received a conviction on the shame attack self, shame withdrawal and self-harm measures with non-binary and female samples demonstrating higher levels than males. Although effect sizes were small, in general, males demonstrated higher levels of self-compassion and sexual harm across the convicted and non-convicted groups. Males also demonstrated small but significantly higher levels of psychological and physical harm in the non-convicted sample but this difference was not found in the convicted sample.

A third of the total sample self-reported that they had received a conviction. Descriptive data are presented in Table 2.9. The data includes those that had violent convictions only, sexual convictions only, both violent and sexual convictions (e.g. criminally versatility) and those with convictions that were neither violent or sexual.

Table 2.9: Means, standard deviations for conviction subtypes and ANOVA differences and effect sizes between conviction types

	Sexual convictions only (n = 151)	Violent convictions only (n = 71)	Sexual and Violent convictions (n = 28)	Other convictions types only (n=62)	P	Eta squared effect size η^2
Shame avoidance	M = 20.76, SD = 8.34 Range: 0-39	**M = 23.89, SD = 7.21 Range: 3-41**	M = 21.17, SD = 7.50 Range: 4-40	M = 22.53, SD = 8.00 Range: 0-41	.05	.022
Shame attack self	M = 22.15, SD = 11.48 Range: 0-48	**M = 30.62, SD = 11.07 Range: 0-48**	M = 22.93, SD = 11.64 Range: 0-46	M = 27.21, SD = 11.96 Range: 4-48	.001	.075
Shame withdrawal	M = 22.13, SD = 11.39 Range: 0-46	**M = 28.80, SD = 9.44 Range: 6-48**	M = 22.16, SD = 10.99 Range: 0-46	M = 25.68, SD = 11.26 Range: 0-46	.001	.057
Shame attack other	M = 10.04 SD = 8.58 Range: 0-39	**M = 18.82, SD = 9.17 Range: 1-41**	M = 14.41, SD = 9.76 Range: 0-34	M = 15.15 SD = 9.96 Range: 0-45	.001	.117
Self-compassion	*M = 39.03, SD = 12.96 Range: 13-65*	M = 32.15, SD = 13.45 Range: 13-65	M = 35.14, SD = 12.90 Range: 13-65	M = 33.76, SD = 14.98 Range: 0-65	.001	.046
Total ACE	M = 34.13, SD = 22.94 Range: 0-90	M = 49.89, SD = 24.16 Range: 2-95	*M = 51.26, SD = 21.47 Range: 10-90*	M = 37.32, SD = 22.58 Range: 0-87	.001	.102

Self-harm	M = 5.84, SD = 5.230 Range: 0-19	**M = 11.30, SD = 5.82 Range: 0-22**	M = 9.05, SD = 5.28 Range: 0-21	M = 7.45, SD = 6.26 Range: 0-20	.001	.124
Psychologic al and physical	*M = 37.54, SD = 27.67 Range: 0-126*	***M = 72.10, SD = 39.30 Range: 7-162***	***M = 72.11, SD = 41.50 Range: 0-188***	*M = 45.19, SD = 31.19 Range: 0-*	.001	.184
Sexual harm others	*M = 1.62, SD = 2.32 Range: 0-8*	*M = 1.48, SD = 2.37 Range: 0-10*	***M = 2.14, SD = 2.63 Range: 0-10***	*M = 1.08, SD = 1.80 Range: 0-7*	.046	.022

The sample that had only violent convictions demonstrated the highest levels of shame attack self, shame withdrawal and shame avoidance. However, the effect size was small. Those with only violent convictions also demonstrated higher levels of shame attack other, psychological and physical harm towards others and self-harm, with a medium effect size. The sample that had both violent and sexual convictions demonstrated higher levels of ACE and psychological and physical harm towards others, with a medium effect size. They also demonstrated higher levels of sexual harm towards others with a small effect size. Finally, the sample that had only been convicted of sexual offences demonstrated higher levels of self-compassion, with a small effect size.

Caution should be taken with these findings as the conviction subtype sample sizes are small and conviction types do not clearly capture specific offence types. For example, those that have received a conviction of murder would only be included as a violent conviction despite the offending behaviour potentially including sexually abusive behaviours and a conviction of rape may only be included as a sexual conviction despite offending potentially including violent behaviours.

Inferential Analysis

The data was analysed using a Pearson product-moment correlation to test hypotheses focussed on the relationship between variables and Structural Equation Modelling to test hypotheses exploring the path between ACE and harm and the mediators in this relationship.

Assumptions for Pearson product-moment correlation and Structural Equation Models were assessed prior to analyses. The sample of 1111 provides a sufficiently large sample size. The variables were not highly correlated (e.g. > .85) or combinations of each other and therefore the multicollinearity assumption was met. The Durbin-Watson test highlighted the independence of the residuals (<2) and the assumption of collinearity was met with all VIF values under 10 (Meyers, 1990) and all tolerance values greater than .2 (Menard, 1995). A small proportion (4.5%) of the data points were missing, with Tabachnick and Fidell (2014) suggesting less than 5% missing data does not have a significant impact on the analyses. Outliers defined by Tabacknick and Fidell (2014) as standardised residuals that are greater than 3.3 or less than -3.3 were identified. The self-harm model found 5 outliers, which represents approximately 0.5% of the sample. Therefore, these outliers were retained. A larger number of outliers were identified within both of the 'harm to others' variables with a combined total of 43 outliers. These outliers were therefore removed from the harm to others models.

On inspection of the scatter plots the assumptions of normality and homoscedasticity were met within the 'harm to self' variable but were not fully met for the 'harm to others' variables. Analyses conducted after outliers were removed indicated excess kurtosis (> 3 or <-3) and skewness (>.8 or <-.8) for the 'sexual harm' variable (kurtosis = 4.89; skewness = 2.23) and excess skewness (1.25) for the 'physical and psychological harm' variable. Tabachnick & Fidell (2014 p. 163) highlight that divergence from these assumptions 'does not invalidate the analysis so much as weaken it' and state that the impact of departure from zero (e.g. kurtosis and skewness) diminishes with large sample sizes (e.g. over 200) (Waternaux, 1976). Although not all assumptions are fully met the large sample size minimises the impact of these deviations (Tabachnick & Fidell, 2014).

Relationship between the variables

The Pearson product-moment correlation coefficients (two-tailed), with outliers removed from the data, are presented for the full, male only and female only samples in table 2.10.

Table 2.10: Correlations (Pearson r) between variables in the full sample *(n* =1068), male sample (n = 467) and female sample (n = 529)

		SAS	SAO	SAV	SWD	SC	ACE	SH	PPHarm
SAS		-							
SAO	All	.437***	-						
	Male	.510***	-						
	Female	.255***	-						
SAV	All	.177***	.245***	-					
	Male	.321***	.395***	-					
	Female	.060	.126**	-					
SWD	All	.821***	.411***	.177***	-				
	Male	.806***	.478***	.344***	-				
	Female	.731***	.213***	.046	-				
SC	All	-.493***	-.273***	.086**	-.464***	-			
	Male	-.439***	-.313***	.053	-.413***	-			
	Female	-.553***	-.553***	.180	-.520***	-			
ACE	All	.354***	.202***	.097**	.408***	-.277***	-		
	Male	.403***	.288***	.133**	.429***	-.264***	-		
	Female	.289***	.289***	.052	.386***	-.358***			
SH	All	.567***	.316***	.081**	.553***	-.367***	.577***	-	
	Male	.507***	.346***	.138**	.495***	-.355***	.636***	-	
	Female	.522***	.231***	.079	.510***	-.485***	.558***	-	
PPHarm	All	.098***	.443***	.212***	.084**	-.027	.375***	.394***	-
	Male	.285***	.529***	.278***	.236***	-.176***	.492***	.542***	-
	Female	.148***	.548***	.131**	.134**	-.209***	.315***	.435***	-
SexHarm	All	.027	.164***	.139***	.034	.017	.195***	.163***	.399***
	Male	.172***	.229***	.180***	.175***	-.081	.281***	.277***	.343***
	Female	.093*	.211***	.086*	.072	-.124**	.150***	.208***	.412***

SAS = Shame Attack Self; SAO = Shame Attack Other; SAV = Shame Avoidance; SWD: Shame Withdrawal; SC = Self-Compassion; ACE = Adverse Childhood Experience (total); SH = Self-Harm; PPHarm = Psychological and Physical Harm; SexHarm = Sexual Harm;

*** P < 0.001, ** p < 0.01, * p < 0.05

ACE and its relationship with shame, self-compassion and harm

It was hypothesised that there would be a positive relationship between ACE and shame measures (hypothesis 4). ACE positively correlated with shame withdrawal, shame attack self, shame attack other and shame avoidance. Shame withdrawal and shame attack self had medium effect sizes in the full sample and male sample whilst the female sample demonstrated a smaller effect size. Shame attack other and shame avoidance had small effect sizes across samples, however, the ACE and shame avoidance measure within the female sample did not have a significant relationship.

It was hypothesised that there would be a negative relationship with ACE and self-compassion (hypotheses 5). ACE negatively correlated with self-compassion across the samples, with small to medium effect sizes. The relationship between ACE and self-compassion was stronger in the female sample than the other samples.

It was hypothesised that there would be a positive relationship between ACE and harm measures (hypothesis 1). ACE significantly correlated with self-harm, psychological and physical harm and sexual harm, with higher levels of ACE correlating with higher levels of harm, and this was consistent across the full, male and female samples. There was a large effect size with self-harm, a moderate effect size with physical and psychological harm, and a small effect size with sexual harm.

Shame and its relationship with self-compassion

It was hypothesised that there would be a negative relationship between shame measures and self-compassion (hypothesis 6). Three of the four measures of shame significantly correlated with self-compassion, with higher levels of shame correlating with lower levels

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of self-compassion. This relationship was found consistently across the full, male and female samples. Shame attack self, shame withdrawal and shame attack other consistently negatively correlated with self-compassion with the full and male samples demonstrating medium effect sizes and the female sample demonstrating large effect sizes. There was a significant positive correlation presented between shame avoidance and self-compassion within the full sample, however, the effect size was negligible and the male and female samples demonstrated that there was no significant relationship between the two variables.

Shame and self-compassion and their relationship with harm

It was hypothesised that there would be a positive relationship between shame measures and measures of harm to self and others (hypothesis 2) and a negative relationship between self-compassion and harm to self and others (hypothesis 3).

All four measures of shame had a significant positive relationship with psychological and physical harm inflicted on others consistently across samples. Shame attack other had a large effect size whilst shame avoidance, shame attack self and shame withdrawal all had a small effect size. There was a small negative relationship between self-compassion and psychological and physical harm, with the relationship being stronger in the female sample than the male sample, however, and demonstrating a small effect size.

Only shame attack other and shame avoidance had a significant positive relationship with sexual harm towards others consistently across samples and demonstrated a small effect size. However, shame attack self within both male and female samples positively correlated with sexual harm with a small effect size and shame withdrawal within the male sample had a small positive relationship with sexual harm. There was a small negative relationship between self-compassion and sexual harm, with the relationship being stronger in the female sample than the male sample, however, the effect size was negligible.

All four measures of shame had a significant positive relationship with self-harm across samples. Shame attack self and shame withdrawal had a large effect size and shame attack other had a medium effect size. Shame avoidance had a small significant positive relationship within the full and male samples but no relationship within the female sample, however, all samples demonstrated a negligible effect. There was also a significant negative relationship between self-compassion and self-harm, with a medium effect size.

Relationship between harm measures

All three measures of harm significantly positively correlated consistently across samples. There was medium to large effect sizes in the relationship between psychological and physical harm and measures of self-harm and sexual harm. There was a small positive relationship across samples between sexual harm and self-harm.

Gender and conviction and relationships between variables.

When comparing male and female samples caution is noted due to an imbalance of those that have convictions and those that have not. The Pearson product-moment correlation coefficients (two-tailed), with outliers removed from the data, are presented for the males with and without convictions and females with and without convictions in table 2.9.

Table 2.11: Correlations (Pearson r) between variables based on gender and conviction.

			SAS	SAO	SAV	SWD	SC	ACE	SH	PPHarm
SAS			-							
SAO										
Conviction	Male		.579***	-						
	Female		.349***	-						
None	Male		.120	-						
	Female		.239***	-						
SAV										
Conviction	Male		.400***	.488***	-					
	Female		.424***	.289*	-					
None	Male		.120	.158*	-					
	Female		-.020	.085	-					
SWD										
Conviction	Male		.808***	.545***	.441***	-				
	Female		.706***	.381***	.242*	-				
None	Male		.807***	.363***	.111	-				
	Female		.735***	.185***	.007	-				
SC										
Conviction	Male		-.461***	-.300***	.054	-.444***	-			
	Female		-.128	-.134	.269*	-.197	-			
None	Male		-.430***	-.340***	.082	-.384***	-			
	Female		-.636***	-.139***	.170***	-.589***	-			
ACE										
Conviction	Male		.487***	.375***	.180**	.461***	-.332***	-		
	Female		.151	.154	-.041	.348**	-.211	-		
None	Male		.366***	.289***	.132	.430***	-.216**	-		
	Female		.327***	.057	.0.57	.416***	-.374***	-		
SH										
Conviction	Male		.560***	.483***	.184**	.534***	-.408***	.649***	-	
	Female		.341**	.410***	.083	.429***	-.217	.519***	-	
None	Male		.531***	.316***	.121	.476***	-.337***	.498***	-	
	Female		.567***	.193***	.067	.541***	-.528***	.553***	-	
PPHarm										
Conviction	Male		.372***	.644***	.337***	.299***	-.189***	.508***	.538***	-
	Female		.044	.623***	.210	.042	-.152	.316**	.496***	-
None	Male		.187*	.462***	.231**	.115	-.231**	.310***	.449***	-
	Female		.207***	.563***	.079	.201***	-.204***	.266***	.403***	-
SexHarm										
Conviction	Male		.276***	.225***	.245***	.264***	-.054	.244***	.207***	.270***
	Female		.095	.200	.253*	.111	-.223	.155	.241*	.433***
None	Male		.009	.328***	.075	-.004	-.165*	.275***	.371***	.477***
	Female		.103*	.214***	.011	.075	-.082	.120*	.182***	.368***

Sample with convictions: Male n=282, female n = 76; Sample with no convictions: Male n=183, female n = 453. SAS = Shame Attack Self; SAO = Shame Attack Other; SAV = Shame Avoidance; SWD: Shame Withdrawal; SC = Self-Compassion; ACE = Adverse Childhood Experience (total); SH = Self-Harm; PPHarm = Psychological and Physical Harm; SexHarm = Sexual Harm;

*** P < 0.001, ** p < 0.01, * p < 0.05

The direction of the relationship between variables is fairly consistent across gender samples with or without convictions. For some relationships between variables, the direction and strength of the relationship is consistent across samples. For example, shame withdrawal and self-harm, shame attack other and psychological/physical harm and ACE and shame withdrawal. However, the strength of the relationship varies within some relationships based on gender or conviction. For example, shame attack self and self-compassion were strongly correlated with all samples, excluding the female sample with convictions where there was no significant relationship. Additional caution should be taken with the sample of females with convictions due to the small sample size.

Shame and self-compassion as mediators in the relationship between ACE and Harm.

Structural Equation Models (SEM), including path analysis and full SEM approaches (e.g. Confirmatory Factor Analysis and path analysis combined), were conducted to identify temporal pathways between childhood adversity and later negative sequelae, namely, harm to self and harm to others (psychological and physical harm; sexual harm). Pathways included shame and self-compassion as mediators (hypotheses 7 & 8). Structured Equation Modelling approaches have advantages over other statistical approaches. They can simultaneously analyse complex models, apply multiple statistical methods in one model, identify direct and indirect correlations between variables, and full SEM (e.g. CFA and path analysis) methods can include both observed and latent variables in the same model as well as estimate measurement error (Jeon, 2015). SEM approaches are therefore appropriate for developing probabilistic causal models and analysing mediating relationships between variables. SEM approaches do however require large sample sizes. Kline (2016) recommends a minimum sample of 200 and a much larger sample size for complex models.

The SEM approach also has a number of limitations. It is susceptible to confirmation bias and inappropriate interpretation from researchers inexperienced with SEM related methods. It is difficult to replicate models where alternative models or model generating techniques have been used. Finally, caution is needed when using cross-sectional data given the directional effects are considered as causal effects. Therefore, SEM models require a robust theoretical basis and models should be considered as plausible rather than absolute (Jeon, 2015).

Kline's (2016) approach to Structural Equation Modelling was used with stages of specification, identification, estimation, and re-specification. The model identified needs to be theoretically grounded, with statistically estimated parameters and demonstrate good fit. The initial approach to analysis involved the testing of an explicit model outlined in the previous chapters. This was tested using path analysis. However, as will be described, this analysis revealed that the model was a poor fit for the data, and a further step in analysis was undertaken to explore possible alternative models that might be investigated in future research.

As recommended by Kline (2016) more than one global fit statistic was used to evaluate the model. This is because each measure has its limitations and therefore using more than one global fit statistic is the preferred approach. Firstly, model chi-square with degrees of freedom and p-value was undertaken. The chi-square to degrees of freedom ration (CMIN/DF) should be less than 5 and non-significant. However, the measure is sensitive to sample size with large samples (e.g. over 200) tending to indicate a significant probability level (Schumacker & Lomax, 2016). Given the large sample size within this study, a model should not be rejected if significant. The Bentler Comparative Fit Index (CFI; Bentler, 1990) considers a value between 0 (no fit) and 1 (perfect fit). Values greater than 0.90 are considered a good fit (Kline, 2016). The Steiger-Lind Root Mean Square Error of Approximation (RMSEA; Steiger, 1990) considers values below 0.10 good fit and below 0.05 very good fit (Steiger, 1989).

Structural Equation Modelling (SEM)

IBM SPSS and AMOS were used to estimate the Structural Equation Models using a maximum likelihood method of estimation with means and intercepts estimated. Total, direct and indirect effects were tested using resampling methods (MacKinnon, Lockwood & Williams, 2004) with the bias-corrected bootstrap. The data was resampled 500 times for each of the models to gain 95% confidence intervals.

Path Analysis Models

The hypothesised models were analysed using path analysis. The first model identified paths between ACE and self-harm. Within the model ACE, shame and self-compassion variables explained 46% of the variance within self-harm. However, the model demonstrated poor fit (χ^2 (df= 10, N = 1111) = 1696.5, p .000); CMIN/DF = 169.65; CFI = 427; RMSEA = .390, PCLOSE = .000) (see figure 2.6).

Figure 2.6: Path Analysis Model 1 ACE to Self-Harm
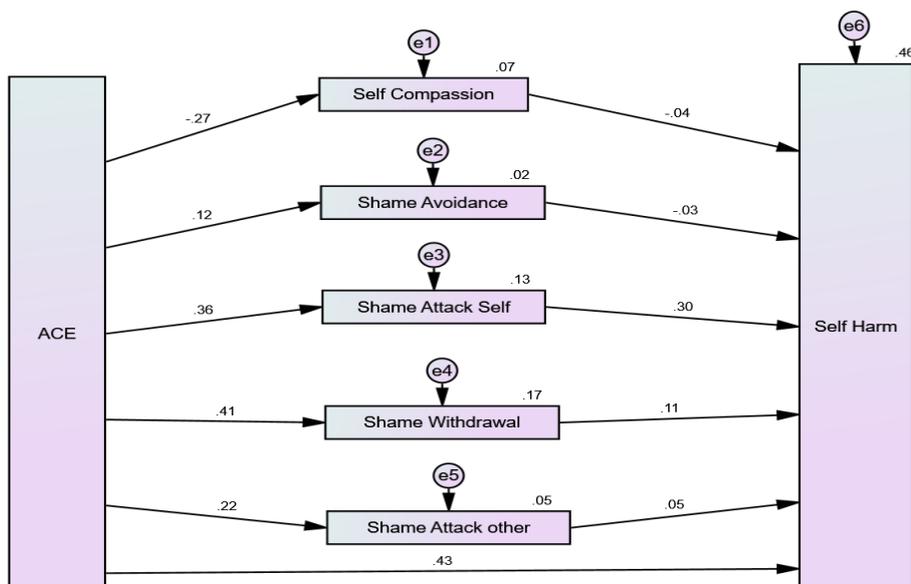
The second model identified paths between ACE and psychological and physical harm towards others. Within the model ACE, shame and self-compassion variables explained 39% of the variance within self-harm. However, the model demonstrated poor fit (χ^2 (df= 10, N = 1068) = 1607.6, p .000); CMIN/DF = 160.76; CFI = 368; RMSEA = .387, PCLOSE = .000) (see figure 2.7).

Figure 2.7: Path Analysis Model 2 ACE to Psychological and Physical Harm
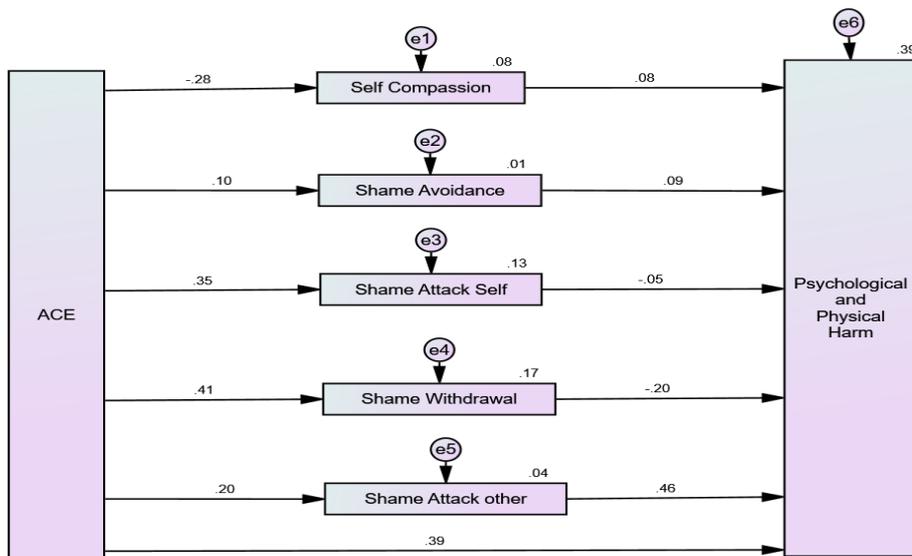
The third model identified paths between ACE and sexual harm towards others. Within the model ACE, shame and self-compassion variables explained just 8% of the variance within self-harm. Additionally, the model demonstrated poor fit (χ^2 (df= 10, N = 1068) = 1607.6, p .000); CMIN/DF = 160.76; CFI = 257; RMSEA = .387, PCLOSE = .000) (see figure 2.8).

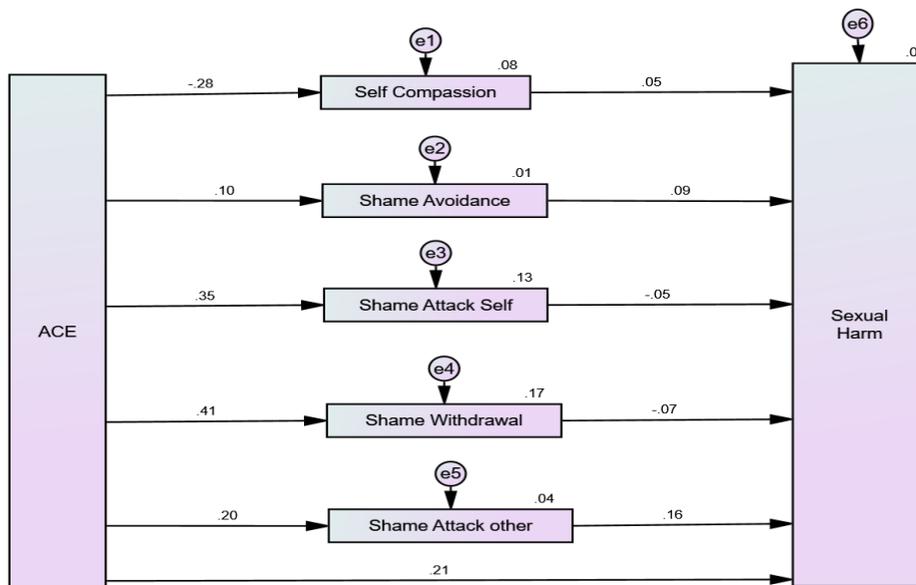**Figure 2.8:** Path Analysis Model 3 ACE to Sexual Harm

Path analyses did not produce models that presented with a good level of fit. Therefore, exploratory analyses were conducted with the introduction of latent variables and therefore a full SEM analysis approach was taken.

Full SEM: Measurement Model

A Confirmatory Factor Analysis was undertaken to confirm 'high shame and low self-compassion' as a latent factor. All four shame variables and the self-compassion variable were included as indicator variables. This latent factor was measured for the harm to self model and harm to others models, with the latter having outliers removed. For both models the shame avoidance variable was removed as it did not provide a meaningful contribution to the latent factor (β .178, p .007), its inclusion in the model did not fit the data well (e.g. χ^2 (df= 5) = 96.75, p .000); CMIN/DF = 19.34; CFI = .951; RMSEA = .131, PCLOSE = .000) and its removal improved model fit.

Shame attack self (β .939, p <.001), shame withdrawal (β .874, p <.001), shame attack other (β .477, p <.001) and self-compassion (β -.525, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the self-harm model (all data included; n=1111). Similarly, shame attack self (β .932, p <.001), shame withdrawal (β .880,

p <.001), shame attack other (β .470, p <.001) and self-compassion (β -.530, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the harm to others models (outliers removed; n=1068). The latent factor model with the specified indicator variables provided a good fit with the data for both self-harm (χ^2 (df= 2, N = 1111) = .70, p .705); CMIN/DF = .350; CFI = 1.0; RMSEA = .000, PCLOSE = .972) and harm to others models (χ^2 (df= 2, N = 1068) = 1.166, p .558); CMIN/DF = .583; CFI = 1.0; RMSEA = .000, PCLOSE = .942).

The factor model with the specified indicator variables were also found to have a good fit with the data when considering male and female samples separately for both self-harm (Male: χ^2 (df= 2, N = 497) = 1.49, p .474); CMIN/DF = .747; CFI = 1.0; RMSEA = .000, PCLOSE = .776; Female: χ^2 (df= 2, N = 540) = 1.56, p .459); CMIN/DF = .779; CFI = 1.0; RMSEA = .000, PCLOSE = .784) and harm to others models (Male: χ^2 (df= 2, N = 467) = .2.21, p .331); CMIN/DF = 1.11; CFI = 1.0; RMSEA = .015, PCLOSE = .658; Female: χ^2 (df= 2, N = 529) = .1.59 p .453); CMIN/DF = .792; CFI = 1.0; RMSEA = .000, PCLOSE = .776). Additionally, all the indicator variables significantly loaded onto the 'high shame and low self-compassion' latent factor within the self-harm model and harm to others models, regardless of gender. However, gender had some influence on how these indicator variables loaded on the latent variable.

For the male sample Shame attack self (β .938, p <.001), shame withdrawal (β .865, p <.001), shame attack other (β .580, p <.001) and self-compassion (β -.471, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the self-harm model (all data included; n=497). Similarly, shame attack self (β .924, p <.001), shame withdrawal (β .871, p <.001), shame attack other (β .554, p <.001) and self-compassion (β -.479, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the harm to others models (outliers removed; n=467).

For the female sample shame attack self (β .896, p <.001), shame withdrawal (β .826, p <.001), shame attack other (β .282, p <.001) and self-compassion (β -.625, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the self-harm model (all data included; n=540). Similarly, shame attack self (β .889, p <.001), shame withdrawal (β .823, p <.001), shame attack other (β .272, p <.001) and self-compassion (β -.624, p <.001) all significantly loaded onto the 'high shame and low self-compassion' latent factor within the harm to others models (outliers removed; n=529).

Figure 2.9: Measurement Model: High Shame and Low Self-Compassion' Latent Variable with Indicator Variables.
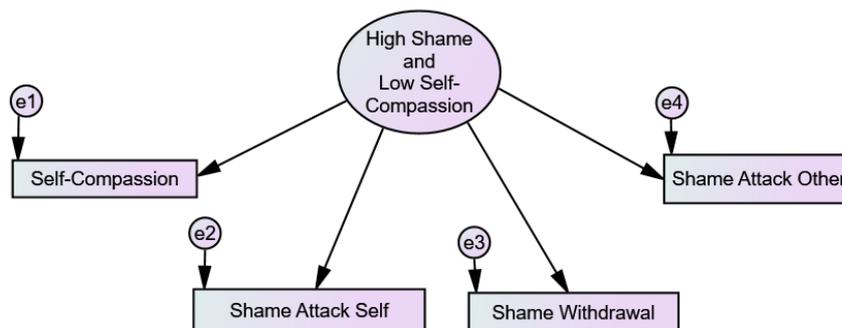
The 'high shame and low self-compassion' latent factor in the full sample self-harm model accounted for 88% of the shame attack self indicator variable, 76% of the shame withdrawal indicator variable, 28% of the self-compassion indicator variable and 23% of the shame attack other indicator variable. Within the male-only sample, the self-harm model accounted for 88% of the shame attack self indicator variable, 75% of the shame withdrawal indicator variable, 22% of the self-compassion indicator variable and 34% of the shame attack other indicator variable. Within the female only sample, the self-harm model accounted for 80% of the shame attack self indicator variable, 68% of the shame withdrawal indicator variable, 39% of the self-compassion indicator variable and 8% of the shame attack other indicator variable.

The 'high shame and low self-compassion' latent factor in the harm to others models accounted for 87% of the shame attack self indicator variable, 77% of the shame withdrawal indicator variable, 28% of the self-compassion indicator variable and 22% of the shame attack other indicator variable. Within the male-only sample, the harm to others models accounted for 85% of the shame attack self indicator variable, 76% of the shame withdrawal indicator variable, 23% of the self-compassion indicator variable and 31% of the shame attack other indicator variable. Within the female only sample, the harm to others models accounted for 79% of the shame attack self indicator variable, 68% of the shame withdrawal indicator variable, 39% of the self-compassion indicator variable and 7% of the shame attack other indicator variable.

An 'attack/harm' based latent variable, with self-harm and harm to others (i.e. psychological, physical and sexual harm) as indicator variables was considered. However, the data was a poor fit and therefore the harm variables were maintained as distinct observed variables.

Full SEM: Structural models

The initial exploratory models included all variables, excluding shame avoidance removed at the measurement model stage. Each shame and self-compassion variable were related to the harm variable (see figure 2.10). These models presented with an adequate level of fit with the data for self-harm (χ^2 (df= 5, N = 1111) = 23.33, p .000); CMIN/DF = 4.666; CFI = .993; RMSEA = .057, PCLOSE = .264), psychological and physical harm (χ^2 = 23.28 (df = 5, N = 1068) p .000; CMIN/DF =4.656; CFI = .992; RMSEA = .059 PCLOSE = 0.244) and sexual harm (χ^2 = 23.28 (df = 5, N = 1068) p .000; CMIN/DF =4.66; CFI = .991; RMSEA = .059 PCLOSE = 0.244). However, to improve parsimony and gain a closer fit to the data an exploratory approach was used. A small number of justifiable re-specifications were made and these followed the principles of parsimony, whilst ensuring the model was theoretically sound, with variables that provided a significant contribution and maintaining a model that was a good fit to the data. For example, the path from self-compassion to harm was removed due to an insignificant relationship with harm in the specific model, increasing parsimony and

improving model fit. As well as a full sample model, a separate model was also established, using the same approach for the male and female sample.

Figure 2.10: Initial Structral Equation Model
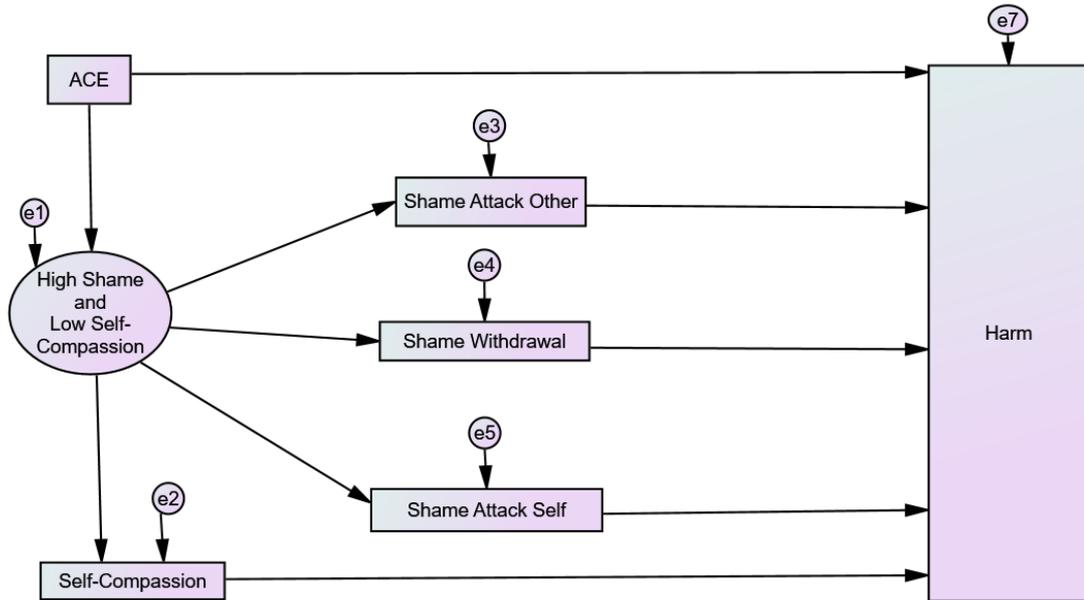
Structural Equation Model 1: Path from ACE to Self Harm

Exploratory analysis identified a pathway model between ACE and self-harm, which has theoretical grounding, significant relationships between variables and adequate goodness of fit. Three models are presented a full sample model, a model with a male sample, and a model with a female sample.

Full Sample SEM Model: ACE to Self Harm

Figure 2.11: SEM Path from ACE to Harm to Self (full sample)
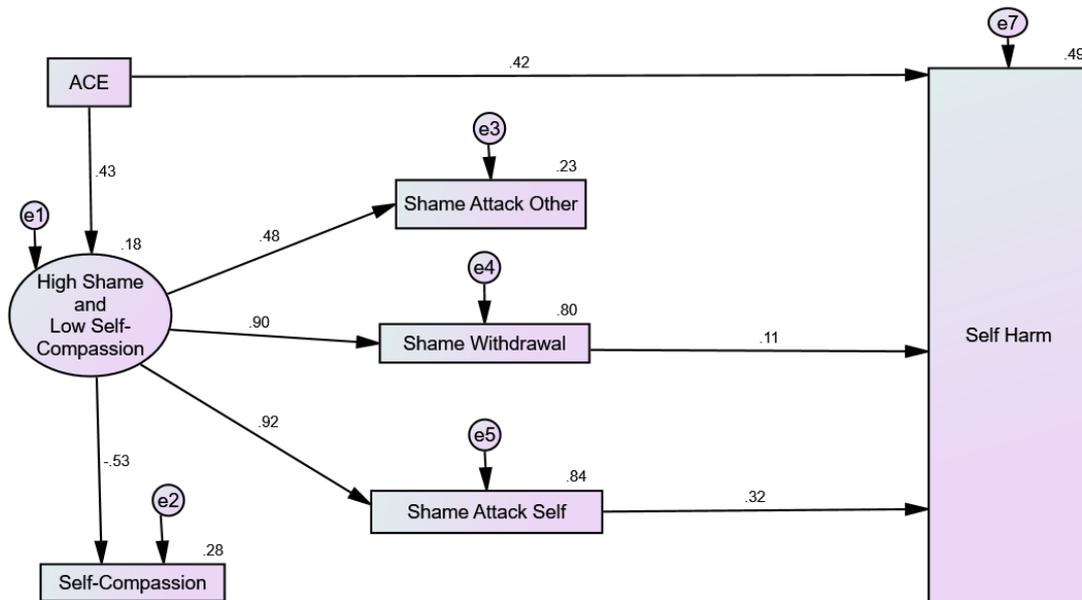
χ^2 (df= 7, N = 1111) = 30.22, p .000); CMIN/DF = 4.31; CFI = .992; RMSEA = .055, PCLOSE = .316

Just under 50% of the self-harm variance (R^2 = .49, p .006) is predicted the model. Adverse Childhood Experiences and the high shame/low self-compassion latent variable predicted over 84% (R^2 = 838, p .007) of the variance within shame attack self, 80% of the variance in shame withdrawal (R^2 = 802, p .003), and 23 % of the variance within shame attack other variables (R^2 = 230, p .003).

Full Sample SEM Model: ACE direct and indirect paths

ACE had a direct (β .421; CI 95% .339 to .464; p .007) and indirect path (β .167; CI 95% .143 to .198, p .003) to self-harm. ACE also had an indirect path to several of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .392; CI 95% .339 to .436; p .007), and shame withdrawal (β .384; CI 95% .324 to .431; p .006) and shame attack other (β .205; CI 95% .170 to .238; p .005). ACE was also indirectly related to lower self-compassion (β -.226; CI 95% -.266 to -.182; p .006) through the high shame/low self-compassion latent variable. Overall, ACE had a large total effect (β .589; CI 95% .546 to .625. p .007) on self-harm combining both direct and indirect paths.

Full Sample SEM Model: Shame paths to self-harm

Shame attack self (β .319; CI 95% .244 to .406; p .002) and shame withdrawal (β .110; CI 95% -.030 to .185; p .014) had a direct path to self-harm.

Full Sample SEM Model: Shame and self-compassion as specific mediators in the path from ACE to self-harm.

The indirect path from ACE to self-harm was increased through shame attack self (β .033; CI 95% .024 to .043; p .010) and shame withdrawal (β .011; CI 95% .003 to .020; p .005).

Full Sample SEM Model: Summary of paths self-harm

ACE, shame attack self and shame withdrawal all have a direct positive path to self-harm. Shame attack self and shame withdrawal are both significant partial mediators in the relationship between ACE and self-harm. However, shame attack self and shame withdrawal only explain a small amount of the total effect. With every 1 SD increase in ACE, a .033 increase in self-harm is predicted through the effects of ACE on shame attack self and an even lower increase (.011) is predicted by the effects of ACE on shame withdrawal.

<u>Male Sample SEM Model: ACE to Self Harm</u>

Figure 2.11a: SEM Path from ACE to Harm to Self (male sample)
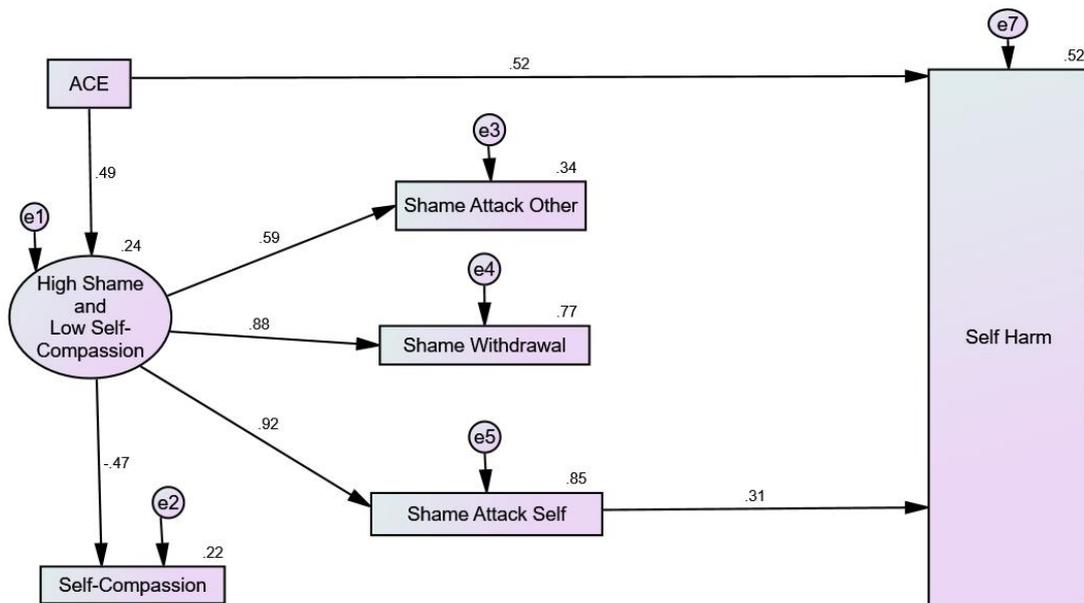
χ^2 (df= 8, N = 497) = 18.85, p .016); CMIN/DF = 2.36; CFI = .992; RMSEA = .052, PCLOSE = .404

Just over 50% of the self-harm variance (R^2 = .517, p .008) is predicted the model. Adverse Childhood Experiences and the high shame/low self-compassion latent variable predicted 85% (R^2 = .846, p .004) of the variance within shame attack self, 77% of the variance in shame withdrawal (R^2 = .775, p .005), and 34 % of the variance within shame attack other variables (R^2 = .343, p .006).

Male Sample SEM Model: ACE direct and indirect paths

ACE had a direct (β .521; CI 95% .455 to .579; p .006) and indirect path (β .141; CI 95% .104 to .180, p .004) to self-harm. ACE contributed to the high shame/low self-compassion latent variable (β .486; CI 95% .408 to .557; p .005), which was related to several other variables within the model. ACE also had an indirect path to several of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .447; CI 95% .337 to .512; p .004), and shame withdrawal (β .428; CI 95% .352 to .503; p .004) and shame attack other (β .285; CI 95% .227 to .350; p .003). ACE was also indirectly related to lower self-compassion (β -.231; CI 95% -.292 to -.176; p .004) through the high

shame/low self-compassion latent variable. Overall, ACE had a large total effect (β .662; CI 95% .610 to .707; p .006) on self-harm combining both direct and indirect paths.

Male Sample SEM Model: Shame paths to self-harm

Shame attack self (β .314; CI 95% .233 to .383; p .005) had a direct path to self-harm.

*Male Sample SEM Model: Shame and self-compassion as specific mediators in the path from ACE to self-harm.*

The indirect path from ACE to self-harm was increased through shame attack self (β .033; CI 95% .024 to .0.43; p .003).

Male Sample SEM Model: Summary of paths self-harm

ACE and shame attack self have a direct positive path to self-harm. Shame attack self was a significant partial mediator in the relationship between ACE and self-harm. However, shame attack self as a partial mediator only explains a very small amount of the total effect. With every 1 SD increase in ACE, a .033 increase in self-harm is predicted through the effects of ACE on shame attack self.

Female Sample SEM Model: ACE to Self Harm

Figure 2.11b: SEM Path from ACE to Harm to Self (female sample)
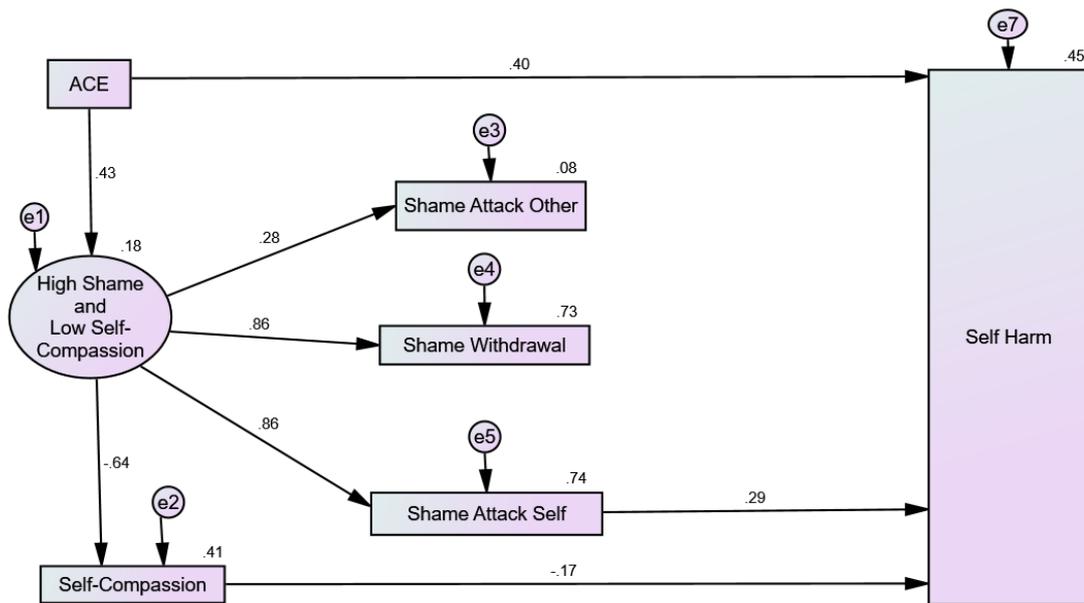
χ^2 (df= 7, N = 540) = 38.28, p .000); CMIN/DF = 5.47; CFI = .972; RMSEA = .091, PCLOSE = .007

Just under 50% of the self-harm variance (R^2 = .451, p .009) is predicted by the model. Adverse Childhood Experiences and the high shame/low self-compassion latent variable predicted over 74% (R^2 = .738, p .010) of the variance within shame attack self, 73% of the variance in shame withdrawal (R^2 = .733, p .005), and 8% of the variance within shame attack other variables (R^2 = .007, p .002).

Female Sample SEM Model: ACE direct and indirect paths

ACE had a direct (β .400; CI 95% .337 to .460; p .006) and indirect path (β .153; CI 95% .118 to .195, p .003) to self-harm. ACE contributed to the high shame/low self-compassion latent variable (β .428; CI 95% .347 to .517; p .003), which was related to several other variables within the model. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .367; CI 95% .299 to .452; p .003), and shame withdrawal (β .366; CI 95% .289 to .442; p .004) and shame attack other (β .118; CI 95% .081 to .164; p .002). ACE was also indirectly related to lower self-compassion (β -.273; CI 95% -.358 to -.208; p .003) through the high shame/low self-compassion latent variable. Overall, ACE had a large total effect (β .554; CI 95% .489 to .609. p .009) on self-harm combining both direct and indirect paths.

Female Sample SEM Model: Shame and self-compassion paths to self-harm

Shame attack self (β .294; CI 95% .216 to .365; p .004) and self-compassion (β -.167; CI 95% -.253 to -.090; p .004) had a direct path to self-harm.

Female Sample SEM Model: Shame and self-compassion as specific mediators in the path from ACE to self-harm.

The indirect path from ACE to self-harm was increased through shame attack self (β .028; CI 95% .020 to .040; p .002) and increased through self-compassion (β .012; CI 95% .006 to .020; p .003).

Female Sample SEM Model: Summary of paths self-harm

ACE and shame attack self have a direct positive path to self-harm. Self-compassion has a direct negative path. Shame attack self and self-compassion are both significant partial mediators in the relationship between ACE and self-harm. However, shame attack self only explains a small amount of the total effect, with every 1 SD increase in ACE a .028 increase in self-harm is predicted through the effects of ACE on shame attack self. Similarly, self-compassion explains a negligible amount of the total effect, with every 1 SD increase in ACE a .012 increase in self-harm was predicted through the effects of ACE on self-compassion.

Structural Equation Model 2: Pathway from ACE to Psychological and Physical Harm to Others

Exploratory analysis identified a pathway model between ACE and psychological and physical harm towards others with theoretical grounding, significant relationships between variables and adequate goodness of fit. Three models are presented a full sample model, a model with a male sample, and a model with a female sample.

Figure 2.12: SEM Path Model ACE to Harm to Others (full sample)
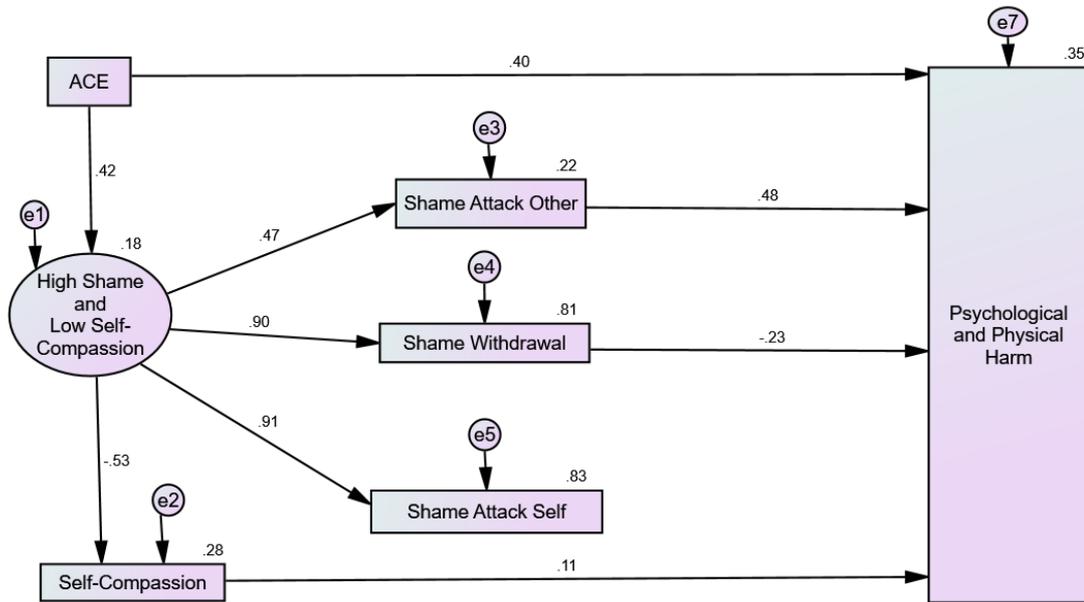
χ^2 = 24.46 (df = 6, N = 1068) p .000; CMIN/DF =4.08 CFI = .992; RMSEA = .054 PCLOSE = .352

Over a third of the variance (R^2 = .35, p .012) within the psychological and physical harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .828, p .005), shame withdrawal (R^2 = .811, p .005), shame attack other (R^2 = .222, p .004), and self-compassion (R^2 = .285, p .006).

Full Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to psychological and physical harm towards others (β .399; CI 95% .338 to .454; p .005). ACE contributed to the high shame/low self-compassion latent variable (β .423; CI 95% .365 to .473; p .005), which was related to several other variables within the model. ACE also had an indirect path to a number of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β

.385; CI 95% .330 to .443; p .005), shame withdrawal (β .381; CI 95% .325 to .429; p .005) and shame attack other (β .199; CI 95% .166 to .236; p .003). ACE was also indirectly related to lower self-compassion (β -.226; CI 95% -.267 to -.189; p .003) through the high shame/low self-compassion latent variable. Overall, ACE had a moderate total effect (β .384; CI 95% .336 to .438; p .002) on harm combining both direct and indirect paths.

Full Sample SEM Model: Shame and self-compassion paths to psychological and physical harm towards others

Shame attack other had a direct path to psychological and physical harm towards others (β .484; CI 95% .432 to .531; p .005). Shame withdrawal had a direct negative path to psychological and physical harm towards others (β -.227; CI 95% -.291 to -.162; p .006). Self-compassion had a positive direct path to psychological and physical harm (β .110; CI 95% .056 to .168; p .003).

Full Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to psychological and physical harm*

The indirect path from ACE to psychological and physical harm was increased through shame attack other (β .136; CI 95% .108 to .167; p .004) and decreased through shame withdrawal (β -.122; CI 95% -.166 to -.082; p .005) and self-compassion (β -.035; CI 95% -.054 to -.018; p .004).

Full Sample SEM Model: Summary of paths to psychological and physical harm

ACE, shame attack other, shame withdrawal and self-compassion all have a direct path to psychological and physical harm towards others. With ACE, shame attack other and self-compassion increasing psychological and physical harm towards others and shame withdrawal decreasing harm. Shame attack other, shame withdrawal and self-compassion are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. However, they only explain a small to moderate amount of

the total effect. With every 1 SD increase in ACE, a .136 increase in psychological and physical harm is predicted through the effects of ACE on shame attack other. With every 1 SD increase in ACE, a .112 decrease in psychological and physical harm is predicted by shame withdrawal. Finally, with a 1 SD increase in ACE, a .035 decrease in psychological and physical harm is predicted by self-compassion.

Male Sample SEM Model: ACE to Psychological and Physical Harm

Figure 2.12a: SEM Path Model ACE to Harm to Others (male sample)

χ^2 = 7.65 (df = 7, N = 467) p .365; CMIN/DF =1.092; CFI = .999; RMSEA = .014 PCLOSE = .880

Just under half of the variance (R^2 = .421, p .007) within the psychological and physical harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .825, p .007), shame withdrawal (R^2 = .783, p .002), shame attack other (R^2 = .311, p .005), and self-compassion (R^2 = .233, p .004).

Male Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to psychological and physical harm towards others (β .431; CI 95% .361 to .509; p .003). ACE contributed to the high shame/low self-compassion latent variable (β .467; CI 95% .389 to .544; p .003), which was related to several other variables within the model. ACE also had an indirect path to a number of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .424; CI 95% .352 to .490; p .005), shame withdrawal (β .413; CI 95% .341 to .484; p .003) and shame attack other (β .260; CI 95% .119 to .315; p .005). ACE was also indirectly related to lower self-compassion (β -.226; CI 95% -.294 to -.169; p .002) through the high shame/low self-compassion latent variable. Overall, ACE had a moderate total effect (β .484; CI 95% .409 to .548; p .005) on harm combining both direct and indirect paths.

Male Sample SEM Model: Shame paths to psychological and physical harm towards others

Shame attack other had a direct path to psychological and physical harm towards others (β .497; CI 95% .430 to .570; p .003). Shame withdrawal had a direct negative path to psychological and physical harm towards others (β -.185; CI 95% -.274 to -.094; p .005).

Male Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to psychological and physical harm*

The indirect path from ACE to psychological and physical harm was increased through shame attack other (β .192; CI 95% .144 to .254; p .004) and decreased through shame withdrawal (β -.113; CI 95% -.180 to -.058; p .003)

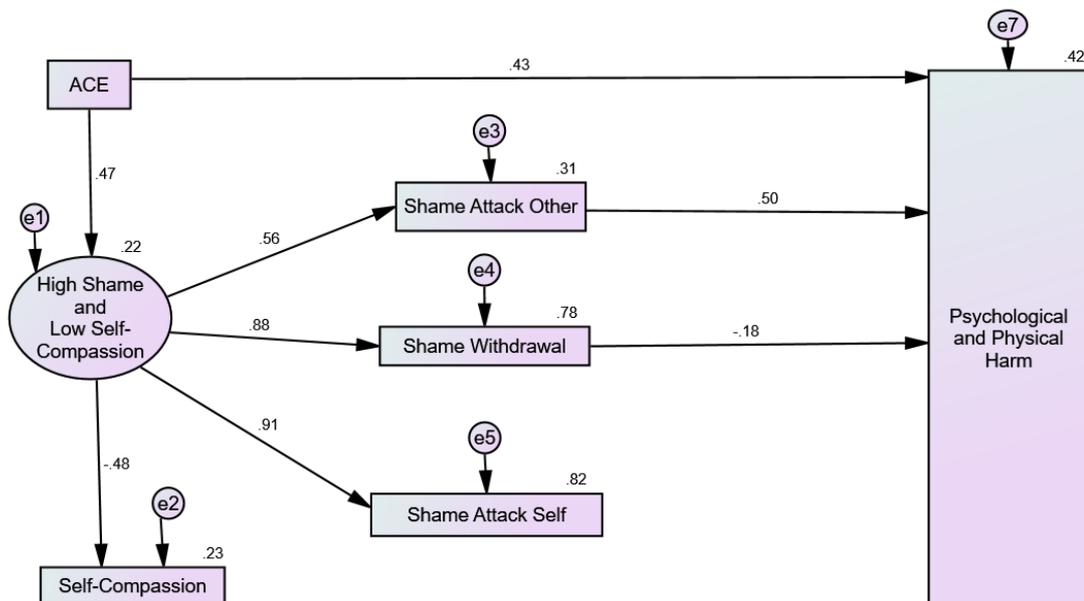M*ale Sample SEM Model: Summary of paths to psychological and physical harm*

ACE, shame attack other and shame withdrawal have a direct path to psychological and physical harm towards others. With ACE, and shame attack other increasing psychological

and physical harm towards others and shame withdrawal decreasing harm. Shame attack other and shame withdrawal are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. They explain a moderate amount of the total effect. With every 1 SD increase in ACE, a .192 increase in psychological and physical harm is predicted through the effects of ACE on shame attack other. With every 1 SD increase in ACE, a .113 decrease in psychological and physical harm is predicted by shame withdrawal.

Female Sample SEM Model: ACE to Psychological and Physical Harm

Figure 2.12b: SEM Path Model ACE to Harm to Others (female sample)

χ^2 (df= 6, N = 529 = 30.30, p .000); CMIN/DF = 5.05; CFI = .976; RMSEA = .088, PCLOSE = .020

Over a third of the variance (R^2 = .397, p .005) within the psychological and physical harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .726, p .002), shame withdrawal (R^2 = .729, p .006), shame attack other (R^2 = .071, p .003), and self-compassion (R^2 = .405, p .004).

Female Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to psychological and physical harm towards others (β .292; CI 95% .210 to .369; p .003). ACE contributed to the high shame/low self-compassion latent variable (β .413; CI 95% .312 to .488; p .007), which was related to several other variables within the model. ACE also had an indirect path to a number of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .352; CI 95% .269 to .422; p .006), shame withdrawal (β .353; CI 95% .258 to .418; p .008) and shame attack other (β .110; CI 95% .066 to .152; p .003). ACE was also indirectly related to lower self-compassion (β -.263; CI 95% -.336 to -.187; p .005) through the high shame/low self-compassion latent variable. Overall, ACE had a moderate total effect (β .327; CI 95% .251 to .394; p .005) on harm combining both direct and indirect paths.

Female Sample SEM Model: Shame and self-compassion paths to psychological and physical harm towards others

Shame attack other had a direct path to psychological and physical harm towards others (β .540; CI 95% .485 to .597; p .003). Shame withdrawal had a direct negative path to psychological and physical harm towards others (β -.149; CI 95% -.251 to -.063; p .003). Self-compassion had a negative direct path to psychological and physical harm (β -.105; CI 95% -.193 to -.013; p .019).

Female Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to psychological and physical harm*

The indirect path from ACE to psychological and physical harm was increased through shame attack other (β .075; CI 95% .046 to .109; p .003) and self-compassion (β .035; CI 95% .003 to .068; p .023) and decreased through shame withdrawal (β -.067; CI 95% -.119 to -.028; p .002).

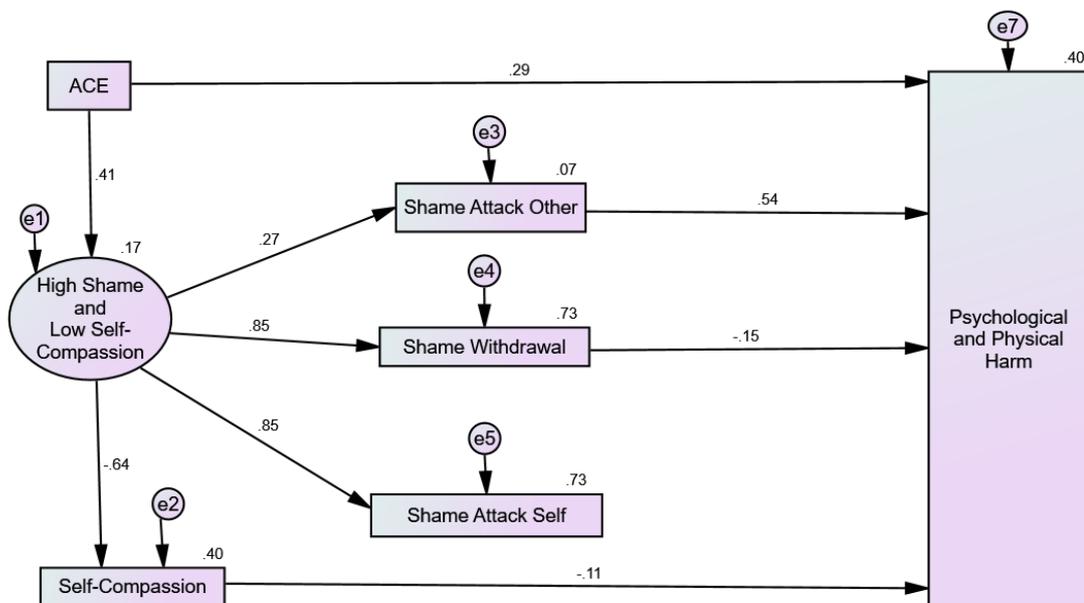*Female Sample SEM Model: Summary of paths to psychological and physical harm*

ACE, shame attack other, shame withdrawal and self-compassion all have a direct path to psychological and physical harm towards others. With ACE and shame attack other increasing psychological and physical harm towards others and shame withdrawal and self-compassion decreasing harm. Shame attack other, shame withdrawal and self-compassion are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. However, they only explain a small amount of the total effect. With every 1 SD increase in ACE, a .075 increase in psychological and physical harm is predicted through the effects of ACE on shame attack other. With every 1 SD increase in ACE, a .067 decrease in psychological and physical harm is predicted by shame withdrawal. Finally, with a 1 SD increase in ACE a .035 increase in psychological and physical harm is predicted by self-compassion, which is the opposite impact of self-compassion' direct negative path to sexual harm.

Structural Equation Model 3: pathway from ACE to sexual harm towards others

Exploratory analysis identified a pathway model between ACE and sexual harm towards others with theoretical grounding, significant relationships between variables and adequate goodness of fit. Three models are presented a full sample model, a model with a male sample, and a model with a female sample.

Full Sample SEM Model: ACE to Sexual Harm

Figure 2.13: SEM Path Model ACE to Sexual Harm towards Others (full sample)
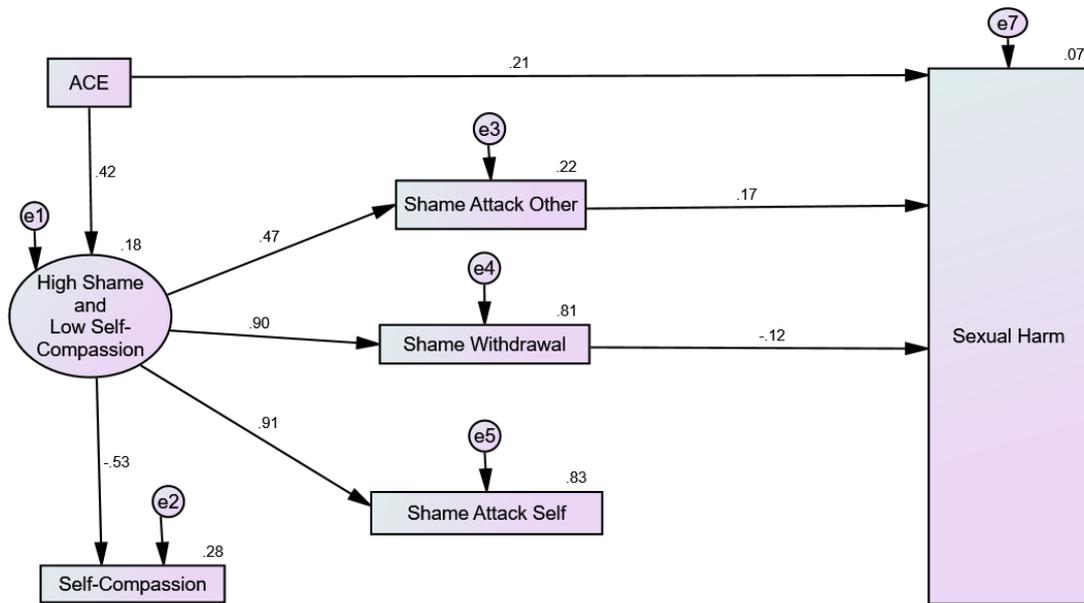
χ^2 = 30.23 (df = 7, N = 1068) p .001; CMIN/DF =4.32; CFI = .988; RMSEA = .056 PCLOSE = .288

A small proportion of the variance (R^2 = .066, p .007) within the sexual harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .828, p .009), shame withdrawal (R^2 = .811, p .003), shame attack other (R^2 = .222, p .003), and self-compassion (R^2 = .285, p .005).

Full Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to sexual harm (β .210; CI 95% .144 to .277; p .004). ACE contributed to the high shame/low self-compassion latent variable (β .423; CI 95% .371 to .483; p .003), which was related to several other variables within the model. ACE also had an indirect path to several of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .385; CI 95% .339 to .440; p .003), shame withdrawal (β .381; CI 95% .333 to .441; p .003) and shame attack other (β .199; CI 95% .163 to .238; p .003). ACE was also indirectly related to lower self-compassion (β -.226; CI 95% -.273 to -.191; p .003) through the high shame/low self-compassion latent variable.

Overall, ACE had a small total effect (β .198; CI 95% .140 to .256; p .005) on harm combining both direct and indirect paths.

Full Sample SEM Model: Shame direct paths to sexual harm towards others

Shame attack other had a positive direct path to sexual harm (β .172; CI 95% .100 to .238; p .004) and shame withdrawal had a negative direct path to sexual harm (β -.123; CI 95% -.204 to -.039; p .005).

Full Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to sexual harm*

The indirect path from ACE to sexual harm included shame attack other (β .003; CI 95% .002 to .004; p .003) and shame withdrawal (β -.004; CI 95% -.007 to -.001; p .004). Both partial mediators had significant but minimal effects.

Full Sample SEM Model: Summary of paths to sexual harm

ACE, shame attack other and shame withdrawal all have a direct path to sexual harm towards others. ACE and shame attack other increased harm whilst shame withdrawal decreased harm. Shame attack other and shame withdrawal are also significant partial mediators in the relationship between ACE and sexual harm towards others. However, they only explain a very small amount of the total effect. With every 1 SD increase in ACE, a .003 increase in sexual harm is predicted through the effects of ACE on shame attack other. With every 1 SD increase in ACE, a .004 decrease in sexual harm is predicted by shame withdrawal.

Male Sample SEM Model: ACE to Sexual Harm

Figure 2.13a: SEM Path Model ACE to Sexual Harm towards Others (male sample)
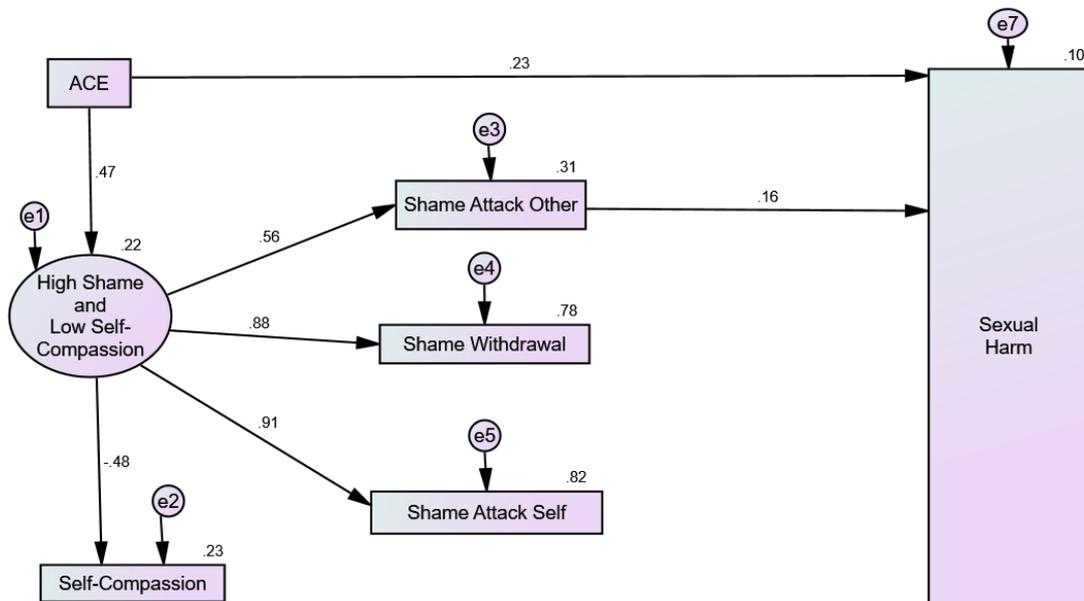
χ^2 = 7.76 (df = 6, N = 467) p .457; CMIN/DF =.970; CFI = 1.00; RMSEA = .000 PCLOSE = .931

A small proportion of the variance (R^2 = .101, p .005) within the sexual harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .825, p .007), shame withdrawal (R^2 = .783, p .002), shame attack other (R^2 = .311, p .005), and self-compassion (R^2 = .233, p .004).

Male Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to sexual harm (β .234; CI 95% .156 to .318; p .004). ACE contributed to the high shame/low self-compassion latent variable (β .467; CI 95% .389 to .544; p .004), which was related to several other variables within the model. ACE also had an indirect path to several of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .424; CI 95% .352 to .490; p .005), shame withdrawal (β .413; CI 95% .341 to .484; p .003) and shame attack other (β .260; CI 95% .199 to .315; p .005). ACE was also indirectly related to lower self-compassion (β -.133; CI 95% -.294 to -.169; p .002) through the high shame/low self-compassion latent variable.

Overall, ACE had a small total effect (β .277; CI 95% .204 to .363; p .002) on harm combining both direct and indirect paths.

Male Sample SEM Model: Shame's direct path to sexual harm towards others

Only shame attack other (β .162; CI 95% .055 to .242; p .005) had a direct path to sexual harm.

Male Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to sexual harm*

The indirect path from ACE to sexual harm was increased through shame attack other (β .004; CI 95% .002 to .007; p .003). Although a significant partial mediator the effect was minimal.

Male Sample SEM Model: Summary of paths to sexual harm

ACE and shame attack other have a direct path to sexual harm towards others. ACE and shame attack other increased harm. Shame attack other was also a significant partial mediator in the relationship between ACE and sexual harm towards others. However, shame attack other as a partial mediator only explains a very small amount of the total effect. With every 1 SD increase in ACE, a .004 increase in sexual harm is predicted through the effects of ACE on shame attack other.

Female Sample SEM Model: ACE to Sexual Harm

Figure 2.13b: SEM Path Model ACE to Sexual Harm towards Others (Female sample)
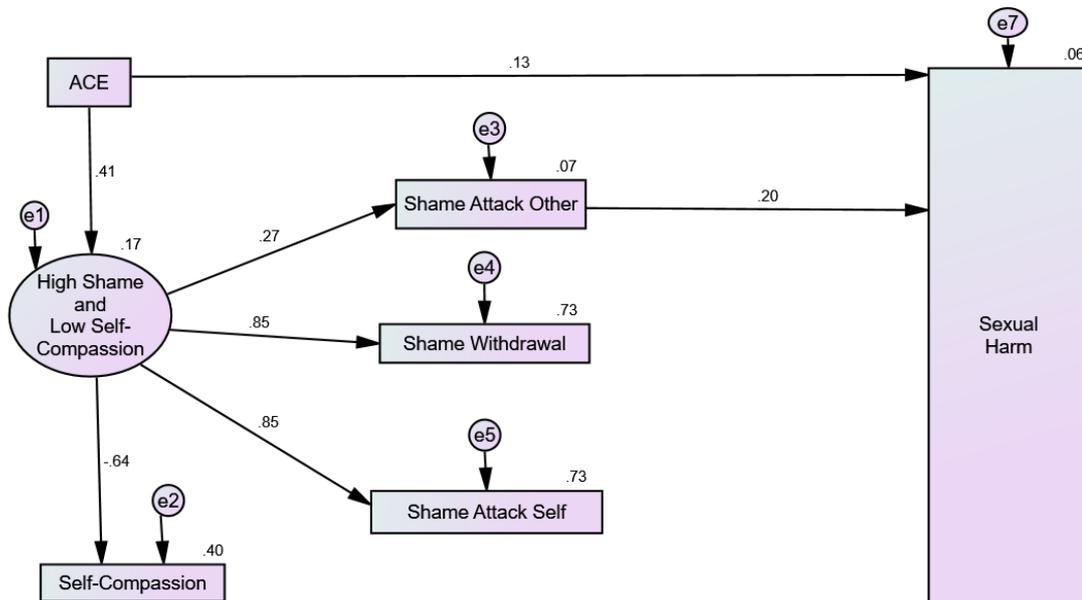
χ^2 (df= 8, N = 529) = 32.16, p .000); CMIN/DF = 4.02; CFI = .969; RMSEA = .076, PCLOSE = .053

A small proportion of the variance (R^2 = .064, p .005) within the sexual harm variable was explained by the model. ACE and the high shame/low self-compassion latent variable explained the variance within shame attack self (R^2 = .726, p .002), shame withdrawal (R^2 = .729, p .006), shame attack other (R^2 = .071, p .003), and self-compassion (R^2 = .405, p .004).

Female Sample SEM Model: ACE direct and indirect paths

ACE had a direct path to sexual harm (β .134; CI 95% .056 to .214; p .002). ACE contributed to the high shame/low self-compassion latent variable (β .413; CI 95% .312 to .488; p .002), which was related to several other variables within the model. ACE also had an indirect path to several of the other variables through the high shame/low self-compassion latent variable. Higher ACE was indirectly related, through the high shame/low self-compassion latent variable, to higher shame attack self (β .352; CI 95% .269 to .422; p .006), shame withdrawal (β .353; CI 95% .258 to .418; p .008) and shame attack other (β .110; CI 95%

.066 to .152; p .003). ACE was also indirectly related to lower self-compassion (β -.263; CI 95% -.336 to -.187; p .005) through the high shame/low self-compassion latent variable. Overall, ACE had a small total effect (β .156; CI 95% .076 to .238; p .002) on harm combining both direct and indirect paths.

Female Sample SEM Model: Shame and self-compassion's direct paths to sexual harm towards others

Only shame attack other (β .20; CI 95% .118 to .285; p .003) had a direct path to sexual harm.

Female Sample SEM Model: Shame and self-compassion as specific mediators in the path from *ACE to sexual harm*

The indirect path from ACE to sexual harm included shame attack other (β .002; CI 95% .001 to .003; p .001), however, it's impact as a partial mediator was minimal.

Female Sample SEM Model: Summary of paths to sexual harm

ACE and shame attack other have a direct path to sexual harm towards others. ACE and shame attack other increased harm. Shame attack other was also a significant partial mediator in the relationship between ACE and sexual harm towards others. However, shame attack other as a partial mediator only explains a very small amount of the total effect. With every 1 SD increase in ACE, a .002 increase in sexual harm is predicted through the effects of ACE on shame attack other.

Overall summary of the SEM Models for self-harm and harm to others

All SEM models presented as plausible exploratory casual models with full sample and male sample models demonstrating good fit with the data and the female sample model demonstrating adequate fit with the data.

Self Harm: Across the SEM models focussed on self-harm 45-52 % of self-harm variance was predicted by the models. ACE and shame attack self had a direct positive relationship with self-harm within the full, male, and female samples, whilst shame withdrawal only presented within the full sample model. A negative relationship between self-compassion and self-harm only presented within the female sample.   In the full sample model, shame attack self and shame withdrawal are both significant partial mediators in the relationship between ACE and self-harm. In the male sample shame attack self was a significant partial mediator in the relationship between ACE and self-harm. Finally, in the shame attack self and self-compassion are both significant partial mediators in the relationship between ACE and self-harm. However, all the mediators identified within these models only explain a small amount of the total effect.

Psychological and Physical Harm: Across the SEM models focussed on psychological and physical harm 35-42% of harm variance was predicted by the models. ACE and shame attack other had a direct positive relationship with harm and shame withdrawal a negative relationship within the full, male, and female samples. Self-compassion had a negative direct relationship with harm only in the female sample model. In the full sample model shame attack other, shame withdrawal and self-compassion are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. They explain a small to moderate amount of the total effect. In the male sample model shame attack other and shame withdrawal are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. They explain a moderate amount of the total effect. In the female only sample shame attack other, shame withdrawal and self-compassion are also significant partial mediators in the relationship between ACE and psychological and physical harm towards others. However, they only explain a small amount of the total effect.

Sexual Harm: Across the SEM models focussed on sexual harm 6-10% of harm variance was predicted by the models. ACE and shame attack other had a direct positive relationship with harm with the full, male and female models. Shame withdrawal had a negative direct relationship with harm but only in the full sample model. Shame attack other was also a significant partial mediator in the relationship between ACE and sexual harm towards others within the full, male and female sample models. Shame withdrawal was also a significant partial mediator in the relationship between ACE and sexual harm towards others but only in the full sample model. For all partial mediators in the relationship between ACE and sexual harm they only explained a negligible amount of the total effect.

Discussion

This research provides support for the proposition that individuals who have had adverse childhood experiences have higher levels of shame, lower levels of self-compassion and an increased likelihood of engaging in self-harming behaviours and behaviours that cause harm to others. Shame also had a positive relationship with harming behaviours (e.g. higher levels of shame increase risk of harm). However, within the exploratory SEM models, this differed by the dimension of shame. For example, shame attack other increased psychological and physical harm, whilst shame withdrawal decreased psychological and physical harm. Self-compassion correlated negatively with harm, although this relationship between self-compassion and harm did not consistently hold in the exploratory SEM models. Self-compassion did, however, have a negative relationship with shame (attack self, attack other, and withdrawal) highlighting its potential as a moderator of shame rather than a directly related factor. Finally, this research provides some support for shame and self-compassion as partial mediators in the relationship between ACE and harm to the self and others. Therefore, these findings indicate that ACE, shame and self-compassion are predictive of harm to self and others through direct and indirect pathways. Pathways from ACE to harm presented similarly across gender. However, it is acknowledged that the female only SEM models, although having adequate goodness of fit, had the weakest fit with the data, suggesting additional factors may need consideration when confirming this model with female only samples. It is important to highlight that the final Structural Equation Models were exploratory and not confirmatory, as the first confirmatory path analyses (e.g. all observed variables included for each form of harm) conducted had a poor fit with the data. Although some caution is noted, it is plausible that ACE, shame and self-compassion are important factors that need to be explored to further our understanding of the factors that increase and reduce the risk of harm to self and others.

These findings strengthen the research base which indicates that ACE increase the risk of self-harming behaviours (e.g. Bruffaerts, et al, 2010; Chartrand, et al., 2015; Ford & Gomez, 2015; Jardim, et al., 2018; Liu, et al., 2018; Moore, et al., 2015; Pinder, et al, 2011; Vaughn, et al., 2015) and behaviours that result in psychological, physical and sexual harm

towards others (e.g. Gold, et al., 2011; Levenson & Grady, 2016; Topitzes, et al., 2012; Stuewig & McCloskey, 2005; Widom & Maxfield, 2001). In addition, it also supports the notion that ACE increases shame (Aakvaag, et al., 2016; Feiring & Taska, 2005; Gluck, et al., 2017; Harman & Lee, 2009; Karan, et al., 2014) and reduces self-compassion (Tanaka, et al., 2011; Vettese, et al., 2011). It also supports the research that links shame with increased risk of harm towards the self (Brown, et al., 2009; Gilbert, et al., 2010; Milligan & Andrews, 2005; Schoenleber, et al., 2014; Xavier, et al., 2016) and others (Aslund, et al., 2009; Gold, et al., 2011; Hosser et al., 2008; Hundt, & Holohan, 2012; Tangney, et al., 2014; Wang, et al., 2017). Finally, to a lesser extent, the findings provide some support for the postulated link between self-compassion and risk of harm (e.g. self-harm and psychological and physical harm to others) (Gregory, et al., 2017; Jiang, et al., 2017). However, similar to previous findings this relationship was not found consistently. For example, within the sample of females that have convictions, self-compassion did not correlate with any of the harm measures despite the female sample without convictions having significant correlations between self-compassion and both self-harm and psychological and physical harm towards others. In addition, the SEM models captured self-compassion's capacity to both increase and decrease risk of harm.

This research also sheds further light on the complex nature of shame, in that it has the ability to decrease the risk of harm (Braithwaite, 2000; Spruit, et al., 2016) as well as increase it. The relationship between shame and harm was influenced by both the type of shame and the nature of harm. Therefore, these findings suggest that making distinctions between the types of shame that are experienced is critical to understanding the pathway between ACE, shame, and harm. The importance of these distinctions is particularly apparent within the psychological and physical harm model, where shame attack other increased risk of harm towards others and shame withdrawal decreased it. This reduction in harm through shame withdrawal may reflect how this type of shame results in a move away from others into isolation, where the opportunity for psychological and physical harm towards others is reduced.

The relationship between self-compassion and shame generally reflected past research with self-compassion having a negative relationship with shame self-attack, shame attack other and shame withdrawal (Barnard & Curry 2012; Neff, 2011; Zhang, et al., 2018). However, a positive relationship presented between self-compassion and shame avoidance. From a conceptual perspective, shame avoidance-based strategies could be considered methods of being self-compassionate, resulting in the different variables being behaviourally similar despite having subtly different underlying functions. For example, having a glass of wine could be considered a way to be compassionate to oneself after a hard day, or a way to avoid the negative feelings that they are experiencing. However, the items used within the CoSS and SCS to measure shame avoidance and self-compassion do not appear to present any indication of conceptual overlap. Therefore, measurement error may be an issue within the SCS and the shame avoidance subscale. Additionally, it also may highlight why self-compassion had little effect on harm to others, with harming others potentially being a way to avoid negative affect and to some level, therefore, being self-compassionate. It may be beneficial for future research to consider the different elements of self-compassion in its relationship with shame and harm to others. For example, it could be possible that self-kindness (as per the examples above) could have the opposite relationship with shame avoidance than the mindful aspect of self-compassion where affective experiences are acknowledged in the moment rather than avoided. Alternatively, other conceptualisations of self-compassion could be utilised.

Although similar findings presented between the psychological and physical harm model and the sexual harm model, the latter presents as the weaker model, with ACE and shame (attack other & withdrawal) having only a small impact in the variance of sexual harm. This may reflect sexual harming behaviours having various functions that go beyond affect management, and therefore, although shame can have an influence, other factors may have a greater impact on the variance. Shame withdrawal demonstrated a positive correlation with sexual harm, within the sample of males that had convictions, and a significant but small negative relationship within the full sample SEM model. It is possible that shame withdrawal can both reduce the opportunity to harm others as well as increase factors associated with increased risk of sexual harming. For example, reducing access to healthy sources to get their sexual needs met (e.g. withdrawal) could increase

the desire to access unhealthy sources (e.g. accessing sexual images on the internet, non-consensual sexual contact, sexual contact with children etc). However, selecting a measure that would capture sexually abusive behaviours that may not have ended in convictions (e.g. minor harmful behaviours) as well as those that did (e.g. sexual conviction), was a difficult task, with only a small number of possible measures identified. Despite the SSS being the strongest measure available there were weaknesses that have likely impacted on the findings. It was evident within the data that a number of individuals convicted of a sexual offence did not rate on any of the SSS items and this is likely to be the case with those who did not consider themselves as having a direct victim or where the situation did not involve an individual saying no or seeming disinterested (e.g. internet-based sexual offending, voyeurism, etc). It is likely that the measure itself is more likely to capture intimate relationship based sexual harm rather than a more representative range of sexually harmful behaviours. Given the limitations of the SSS and the findings within this research, some caution is warranted. Future research would benefit from developing and using a more robust measure of sexual harm. Additionally, it is recognised that this research did not distinguish between minor and more serious harm inflicted on others or whether the behaviour was impulsive or premeditated. Future research may benefit from considering if these elements impact on the direction or strength of the relationships between ACE, shame, self-compassion and sexual harm.

A number of other unexpected findings presented within this study. Firstly, the sample with convictions presented with higher levels of self-compassion than the sample without convictions. When considering offending subtypes, those with sexual convictions only, also presented with higher levels of self-compassion. It is possible that self-compassion can be focussed more heavily on 'being kind to the self' and this element of self-compassion does not distinguish between healthy and unhealthy ways of 'being kind to the self'. For example, using drugs, soothing with sex, releasing aggression and self-harm could also be considered ways to be kind to the self, despite them being unhealthy and likely increasing risk of harm. This may also be reflected in that shame avoidance, potentially linked to the aforementioned behaviours, was the only measure of shame to positively correlate with self-compassion. This complex potential dual aspect of self-

compassion (e.g. healthy and unhealthy aspects), may also be reflected in the inconsistent relationship between self-compassion and harm observed within the SEMs. For example, across the three models that included self-compassion within the pathway from ACE to harm the direct path and indirect path created opposing results. Within the female only models of self-harm and psychological/physical harm towards others the direct path indicated higher self-compassion reduced harm, however, the indirect path increased harm. Within the full sample model, the direct self-compassion path increased harm and the indirect path reduced harm. A related unexpected finding was that the male sample (with and without convictions) demonstrated higher levels of self-compassion than the female sample. These findings highlight the need for a greater understanding of self-compassion and potential gender differences within the conceptualisation of self-compassion used in this research.

Unexpectantly, the sample without convictions also presented with higher levels of shame attack other than the sample who had received convictions. It is possible that the sample with convictions are more cautious acknowledging behaviours that indicate that they behave in ways that harm others, particularly for those completing the questionnaire in custody, and this may be similar to the findings noted for the sexual harm measure, although to a lesser extent. Those with convictions may also be less self-aware when considering indirect forms of harm that they have inflicted on others and therefore only report more severe forms of harm that also may occur less frequently (e.g. one incident of murder versus numerous physical assaults). Future research would benefit from breaking down psychological and physical harm in a manner that allows for a more sensitive exploration of harm towards others based on severity and frequency of harm rather than solely an overall score.

Another unexpected finding was that the shame attack other variable had a moderate positive relationship with self-harming behaviours. It is surprising that harm inflicted on the self can be influenced by shame that manifests in attacking the other. However, this may reflect the experiences of those that support these individuals that have described

self-harming behaviours as an aggressive way (e.g. considering only their own needs with disregard for the need of others or impact) to regain control or manipulate situations (Garbutt & Casey, 2015; Ireland & Quin, 2007). In previous research, individuals that perceived self-harming as a negative behaviour directed towards others (e.g. punitive, controlling, manipulative, disruptive and aggressive) have been considered to hold negative attitudes towards those who self-harm (Ireland & Quin, 2007). However, these individuals may be simply reflecting their observations from their phenomenological experience of their interaction with individuals that self-harm rather than an ingrained negative attitude. Self-harming behaviours can be an externalisation of shame (e.g. shame attack other), which serves as a way to reduce painful affect, but can be experienced by others as aggression, as would be expected in shame attack other's manifestations. Therefore, this research may support the notion that self-harming behaviours may present as aggressive despite the function of this behaviour being to reduce their own painful affect. This is particularly important for those that dual harm (e.g. hurt themselves and others) (Slade, 2018) as individuals that are considered to be disruptive/aggressive and self-harm are more likely to be responded to with negative attitudes and punitive behaviours from those supporting them (Rayner, Allen, & Johnson, 2005; Ireland & Quinn, 2007); which in turn can heighten the risk of self-harm (Towel & Forbes, 2002) and suicide further (Nock, Joiner, Gordon, Lloyd-Richardson & Prinstein, 2006; Owens, Horrocks, & House, 2002). Rayner, et al. (2005) explored this dynamic between the 'carer' and the 'cared for' (e.g. nurse-patient; officer-prisoner etc) from a countertransference perspective and it is likely that considering the role of transference and countertransference in understanding the shame manifestations and responses to these would be a valuable and interesting contribution to the field. It is noted that although the shame attack other path to self-harm was removed to improve the SEM's goodness of fit, it did present with a significant but small positive relationship with self-harm (β = .052, p <.05) with an adequate level of fit with the data. The relationship between shame attack other and self-harm needs to be explored further.

Despite this original research having a number of key strengths, it also has a number of limitations. Firstly, an inherent limitation with cross-sectional studies is the difficulties

evidencing temporal relationships due to the concurrent measurement of variables and this is particularly important within SEM (Gollob & Reichardt, 1987, 1991). Structural Equation Modelling assumes that there are directional influences amongst variables and that a finite amount of time occurred between them. For example, there is an assumption that ACE occurs before shame and shame occurs before harm is inflicted on the self and others. Although theoretically sound assumptions this cannot be confirmed without longitudinal studies being undertaken, and even then, directionality does not necessarily confirm causality. Additionally, there may have been intervening life events that could have caused shame rather than being attributable to ACE (Tajima, Herrenkohl, Huang, & Whitney, 2004). Therefore, some caution needs to be taken with the findings in this study. Secondly, each of the harm measures included provided a static assessment of harm, including current and historical evidence of harming behaviours, and therefore gaining trait-based measures rather than state-based. This means that they are unable to dynamically measure risk in relation to fluctuations in psychological factors such as shame and self-compassion. However, it is also noted that the shame and self-compassion measures are also similarly trait based. Therefore, future research may benefit from considering more dynamic measures that allow for fluctuations in shame and self-compassion and changes in harming behaviours. Thirdly, measuring childhood adversity using a retrospective methodology has received criticism (Hardt & Rutter, 2004; Howe & Courage, 1993; Newbury, Arseneault, Moffitt, Caspi, Danese, Baldwin, & Fisher, 2018). Retrospective measures are more likely to miss ACE that participants have forgotten or that they chose not to disclose, however, prospective measures can miss ACE that are not recognised or reported during childhood (Newbury, et al., 2018). Therefore, retrospective studies in the same way as prospective studies have their disadvantages but they also have value. It is however recognised that an individual's mood at the time of completing the measures could impact on memory biases (Newbury, et al., 2018; Susser & Widom, 2012).

Similar to the issues raised about measuring ACE retrospectively, there are potential limitations due to the inherent difficulties with self-report measures used to examine psychological concepts such as shame and self-compassion and behaviours that

individuals may feel too ashamed to expose (e.g. harmful behaviours inflicted on the self or others). These measures require a level of self-awareness and openness about issues that they may not want to acknowledge themselves, let alone share with others, and therefore, they are vulnerable to measurement error. Finally, although the study has gained a large sample size, which included forensic and community populations, the research would have benefitted from a more diverse sample. For example, the majority of the sample considered themselves to be white British. Similarly, the research would have benefitted from a greater number of women within the forensic population. However, it is noted that this proportion reflects the smaller proportion of women within the prison population with females representing approximately 5% of the UK prison population (Official Statistics: Prison Population Figures, 2017). Future research would benefit from gaining a larger sample of females that have received convictions and a more diverse sample.

Despite these limitations, there are key strengths within this research, including the large sample size, the inclusion of community and custodial samples, and the robust psychometric measures used (N.B. with caution raised in relation to the sexual harm measure). These strengths support the value of the findings in relation to its original contribution to research and its direct theoretical and clinical applications. This research presents ACE, shame and self-compassion as important factors in understanding risk of harm and presents three plausible models to examine within future research.

Implications for theory

The findings from this study have some key implications for theory. Firstly, this research highlights the importance of recognising that shame is not unidimensional and therefore should not be measured as such when evaluating theories that involve shame. Shame has both an 'attacking' element and a 'withdrawal' element at its core. This core underlying theme of attack can be both directed towards the self and directed towards others. Future research, therefore, needs to include a multidimensional conceptualisation of shame in order to fully understand its relationship with other factors within an

overarching theory. Unidimensional measures of shame should only be used if there is a theoretical grounding that only that aspect of shame is relevant within the specific theory being tested. Secondly, these findings highlight that self-compassion and its theoretical association with harm to the self and harm to others would benefit from further development and exploration. Specific focus around the distinction between healthy and unhealthy self-compassionate behaviours and the impact that the different elements of self-compassion have on harm to self and others would also be beneficial. Additionally, theories developed using Neff's (2003) measure of self-compassion may have been impacted by the measurement error potentially identified within this research. Therefore, it may be helpful to reconsider these, in light of potential measurement errors. Finally, ACE, shame and self-compassion should be considered in theories that aim to explore the psychological consequences of ACE and the development of self-harming behaviours and behaviours that result in harm towards others. Several theories identify life circumstances (e.g. loss of a job, loss of a relationship) as factors that raise risk of harm without considering shame as a potential psychological consequence of these events, which may, in fact, be what raises this risk. They also highlight other emotions that may be more accurately conceptualised as shame, such as anger, frustration, sadness and fear. Similarly, some theories do not fully consider how ACE may result in psychological vulnerability which in turn may make an individual more susceptible to the negative psychological consequences associated with these life events. Therefore, relevant theories need to consider shame and ACE as potentially important factors.

Implications for practice

The study has important implications for clinical practice. Most significantly, it highlights the importance of understanding ACE and shame when working to support an individual to reduce their risk of harm towards themselves and/or risk of harm towards others. Therefore, the research supports the value of trauma-informed treatment interventions and trauma-informed environments to facilitate a reduction in risk of harm. In line with this, environments and interventions need to be non-shaming with a specific focus on reducing shame attack self and shame attack other manifestations. Similarly, the research highlights the importance of clinicians understanding a multidimensional

conceptualisation of shame when working with clients who have had ACE and/or are at risk of harm towards themselves or others. This has significant implications on a number of levels. Firstly, on an individual intervention basis, it will be important for clinicians to recognise that an individual who presents as aggressive towards others may, in fact, be experiencing shame (e.g. shame attack other). Therefore, interventions focussed on reducing shame would likely be more effective in these moments than interventions designed to target aggression and therefore more likely to reduce harm to the self and others. Secondly, formal offending behaviour treatment interventions, both on an individual basis and within treatment groups, would benefit from ensuring strategies used are non-shaming and treatment interventions across offence type would benefit from having specific interventions added that directly target shame. Similarly, interventions that target risk of self-harm should also address shame. Thirdly, behaviour management and support strategies for those that self-harm and/or those that are aggressive/disruptive need to reduce their use of elements that could trigger shame. For example, systems in place that expose a potential 'lowered in the eyes of the other' status (e.g. "self-harmer" / "vulnerable" / "weak" / "disruptive" / "sex offender") or creating punishments that are exposing and segregating (e.g. an 'outcast status'). This shaming exposure may serve to increase self-harming behaviours and aggressive behaviours towards others (e.g. shame attack self and shame attack other manifestations). Similarly, simply engaging with individuals that have harmed themselves or others in a manner that indicates that they are somehow 'less than' others in society, including micro-societies, can possibly increase risk rather than act as a deterrent. This is also a concern when individuals are released from custody or hospital and have to manage the stigma and shame associated with a number of management and support strategies, such as having to disclose their offences (even if not relevant to the specific role) to employers. Risk management strategies are necessary to prevent harm but those that are less shaming are likely to be more successful at reducing risk and increasing successful integration into society. The findings of this research also highlight the importance of investing in supportive interventions for children who have experienced adversity. This would reduce the risk of a potential trajectory towards harming themselves or others and aid post-traumatic growth and resilience. Children that present with high levels of shame attack

self and shame attack other may also benefit from interventions that reduce shame. (See systematic review in chapter 3).

Future directions in research

This research needs to be replicated with other samples to further test the plausibility of the models presented within this research and increase the generalisability of these findings. Replication studies need to ensure they use a multifaceted conceptualisation of shame and they would also benefit from considering alternative ways of measuring self-compassion. As raised research that explores in greater depth the relationship between self-compassion and harm, with consideration of the different elements of self-compassion and the potential for healthy and unhealthy self-compassionate behaviours, may shed light on the unexpected findings within this study. Additionally, research that explores the potential moderating impact of self-compassion on shame would help to establish a clearer understanding of the role of self-compassion. This research would also benefit from being replicated with more robust measures of sexual harm and the different forms of sexual offending. For example, shame withdrawal may be positively associated with individuals who sexually offend on the internet but negatively associated with individuals who commit contact sexual offences.

Research would also benefit from exploring other potential psychological factors of causation, beyond shame and self-compassion, that may explain more of the variance within the presented model. In addition, including measures of factors that may help to increase resilience and post-traumatic growth following ACE (e.g. a supportive adult figure, intelligence, etc) and other forms of ACE not captured within this research would add helpful insights to theories linking ACE to harm. Longitudinal research methods would also be beneficial and in particular studies that can identify whether a fluctuation in shame is associated with a corresponding change in measures of harm to self and others. Finally, research that identifies interventions that can reduce shame and the negative psychological consequences of ACE, as well as increase resilience and post-traumatic growth, would be of great benefit. This research highlights a range of potential directions

for future research. However, the next step would be to confirm the models identified within this research taking learning forward with regards to the limitations identified. This may be aided further by focussing more specifically on each form of harm separately and potentially considering the severity and nature of harm.

CHAPTER THREE:

SYSTEMATIC REVIEW

'What works in the treatment of shame reduction: a systematic review'

Abstract

Background: Shame has been considered a risk factor and treatment target associated with a number of public health concerns including self-harm, suicide, depression, and crime. There is, therefore, a need to establish effective interventions to reduce shame. This review evaluates current research to establish if psychological interventions are effective at reducing shame and if so, which interventions show promise.

Methods: A systematic search of four databases (PsycINFO, PubMed, EBSCO: Criminal Justice Abstracts, Web of Science) and grey literature was conducted in April 2017. Studies that met the inclusion criteria were included (e.g. a psychological intervention, shame as an outcome measure).

Results: This systematic review considered 7391 papers, with 76 full papers reviewed, to identify 13 studies that met inclusion criteria. These studies used RCT methodology and the studies varied in quality. The psychological interventions included cognitive based therapies, 3rd wave CBT approaches (e.g. DBT, CFT, ACT), exposure therapy, interpersonal psychotherapy, individualised psychotherapy, trauma-focused therapy, and present focussed therapy. These psychological interventions demonstrated minimal to large effects at reducing shame. When psychological interventions were combined within a meta-analysis, psychological interventions were found to present a small to moderate effect size. Control conditions combined and evaluated in isolation demonstrated no effect on shame.

Conclusion: Psychological interventions can be effective at reducing shame. Caution should be taken due to the varied quality of the studies included; however, the overall quality of the systematic review was moderate. Further studies are required, and the systematic review should be updated in line with new research.

Introduction

Shame can have a detrimental impact on the health of an individual and their behaviour towards themselves and others (e.g. Kim, Thibodeau, & Jorgensen, 2011; Dutra, Callahan, Forman, Mendelsohn & Herman, 2008; Bryan, Ray-Sannerud, Morrow & Etienne, 2013; Gold, Wolan Sullivan & Lewis, 2011; Stuewig, Tangney, Kendall, Folk, Meyer & Dearing, 2015). Despite research linking shame to a wide range of disorders, relatively little attention has been focussed on how this potentially unhelpful condition can be targeted and reduced through interventions. If an effective intervention is identified it would have positive implications for a wide range of public health and public protection concerns. An initial review of the literature to identify potentially effective interventions in reducing shame is of great importance in light of the growing evidence base that shame is a risk factor presenting across a number of disorders.

Shame can be considered from a range of theoretical perspectives and its conceptual complexity has resulted in definitional issues (Gilbert, 1998). However, contemporary concepts of shame consider it as an integration of an affect, cognition, behaviour and interpersonal experience. It is described as involving aversive affective experiences (Nathanson, 1987), cognitions which are negatively focussed on the self (Lewis, 1971), possibly resulting from the negative evaluation of self from others (Gilbert & Andrews, 1998), and a cluster of behaviours reflecting these thoughts and feelings which in turn can impact on interpersonal relationships (Tangney & Dearing, 2002). For example, individuals can respond to shame by withdrawing (e.g. from social interactions), attacking the self (e.g. self-harm), engaging in avoidant behaviours (e.g. substance use) or attacking others (e.g. verbally/physically lashing out at others) (Nathanson, 1992). Although shame can be considered from an evolutionary standpoint to have a positive function (Gilbert, 2003) it is also recognised within clinical and research fields that it can become a dysfunctional and toxic emotion (Lewis, 1971; Nathanson, 1987; Tangney & Dearing, 2002; Gilbert, 2003).

Across a range of fields including clinical, counselling, health, and forensic psychology there has been increased recognition of the impact that shame has on the individual and

the importance of it as a treatment target within psychological interventions. Shame has been positively correlated with physical health conditions (e.g. Wilson, Xindi, Calabrese Heckman, Sikkema, & Hansen, 2017), mental health conditions (e.g. Kim, et al., 2011; Cavalera, et al., 2016), increased risk of suicide and self-harm (e.g. Dutra, et al.,, 2008; Bryan, et al., 2013) and increased risk of offending behaviours (e.g. Gold, et al., 2011; Chakhssi, de Ruiter, & Bernstein, 2013; Stuewig, et al., 2015). Although this is largely correlational evidence, there is also good theoretical grounds to consider shame as not only linked with a wide range of conditions but also implicated in the various stages of their development and maintenance. For example, the underlying cause of the condition as well as the onset, perpetuation, and exacerbation of the condition.

Shame presents as a risk factor that can not only cause dysfunction but can also create a continual cycle of maintenance and prevent help-seeking behaviours. For example, the consequences of the behavioural manifestation of shame (e.g. observable symptomology, harm to self or others) may result in the individual feeling further shame on a meta-cognitive level (e.g. being ashamed of shame) and therefore the cycle is maintained. Research findings from across a wide range of perspectives suggest that shame is, therefore, a transdiagnostic risk factor. Transdiagnostic refers to not only being a factor that presents across various diagnoses but also one that contributes to the development, maintenance or exacerbation of symptoms (Egan, Wade, & Shafran, 2011; Kranzler, Young, Hankin, Abela, Elias, & Selby, 2016). Despite shame being significant in a range of conditions, it has not been identified as a relevant symptom for many diagnoses at all. It is therefore not surprising that research into the interventions to address shame appears to be in its infancy.

Despite a fairly limited research base on the interventions that address shame there has been a greater focus on treatment interventions being designed to reduce shame. For example, treatment approaches such as Acceptance and Commitment Therapy (adapted to target shame) (Hayes & Strosahl, 2010; Luoma, Hayes, Walser, 2017) and Compassion Focussed Therapy expressly suggest they directly help to reduce shame (Gilbert, 2010; Irons & Beaumont, 2017; Lee, 2012). It is necessary to explore the current literature to identify what evidence there is that psychological interventions reduce shame and in fact

which are the most effective. To the best of knowledge of the author no such systematic review currently exists.

The purpose of this systematic review was to explore the current research base to establish the different psychological interventions that have been evaluated in relation to shame reduction. It indicates whether psychological interventions are more effective than no intervention and presents the various types of psychological intervention evaluated and the reported effect they had on reducing shame.   Given the transdiagnostic importance of shame, this review can inform policymaker decisions on the most appropriate treatment pathways to reduce shame and therefore will allocate resources effectively.

Method

The systematic review will follow the methodology proposed by Petticrew & Roberts, (2006). This method involves the following 12 stages: -

Step 1: define the question

Step 2: consideration of the value of a steering and advisory group.

Step 3: to write a protocol and have this reviewed

Step 4: carry out the literature search

Step 5: screen the references

Step 6: assess the remaining studies against the inclusion/exclusion criteria

Step 7: data extraction

Step 8: critical appraisal

Step 9: synthesis of the primary studies

Step 10: consider the effects of publication bias, and other internal and external biases

Step 11: writing up the report

Step 12: wider dissemination.

In addition, the review will comply with the PRISMA statement (Moher, Liberati, Tetzlaff, Altman, the PRISMA group, 2009). This statement was developed by the PRISMA group as a guide for reporting systematic reviews and meta-analyses in a manner that increased transparency. This statement includes a 27-item checklist and a four-phase flow diagram to ensure that relevant information is clearly presented in a manner that aids transparency and replication.

The focus of this systematic review has been developed with reflection on current research, gaps within the research, clinical need and future policy and decision making. The PICO (Booth & Fry-Smith, 2004) approach has been used to ensure a focused review question.

Table 3.1: PICO method

Population	Individuals (adult human) with or without diagnoses
Intervention	Any psychological therapy
Comparator	Control group (e.g. waitlist, treatment as usual, other treatment approaches including other psychological interventions)
Outcome	A reduction in shame (measured pre to post treatment as a primary or secondary outcome measure)

The PICO approach formed the following specific review question:

'What psychologically informed treatment interventions reduce shame in individuals that have engaged in treatment where shame reduction is measured pre and post treatment and a comparator is included.'

Identification of studies

Four databases were searched (PsycINFO, PubMed, EBSCO: Criminal Justice Abstracts, Web of Science) in April 2017. The same search strategy was used for each of the databases. However, adaptations were made to meet the specific requirements for each database. The search terms were specifically selected to reduce the risk that relevant studies were omitted in error. This was particularly important due to the different definitions of shame presenting within the literature and the interchangeability of shame with other terms such as self-criticism. The following search terms were used to identify potentially relevant papers and included Boolean operators to increase search sensitivity:

(Shame* OR self-stigma OR self-criticism OR self-blame OR self-disgust OR defectiveness OR ashame* OR self-hatred OR self-hate) AND (Treatment OR therapy OR intervention OR Programme Or Program OR therap* OR EMDR).

In order to counter the impact of publication bias, grey literature was searched (e.g. internet search engines) and academic experts within related fields were contacted to establish if any additional unpublished studies were available. Experts in the field were

considered to be those with a specific interest in research focussed on shame. Additionally, requests were made to experts within the various treatment modalities that initially presented within the systematic review, to establish if any unpublished research could be included. No further studies were identified from experts, but five additional studies were identified through searching the grey literature. However, it is noted that these research projects had also been published.

Inclusion and exclusion criteria and study selection

Inclusion criteria were established (see table 3.2) there were no exclusion criteria.

Table 3.2: Inclusion Criteria.

Inclusion criteria
Journal articles, dissertations and theses
Quantitative data
Written in English
Human adult
Research dated between 2000 and 2018
A direct (valid and reliable) measurement of shame pre and post-treatment.
A psychologically informed intervention has taken place
The intervention is intended to reduce shame
Randomised Control Trial with comparators included (e.g. waitlist, control group, other psychological treatment/treatment as usual).

The studies identified from the systematic search of the literature (see Figure 3.1) were initially reviewed by title and abstract. These were checked to determine their content so that those that did not meet inclusion criteria could be excluded. Those studies where it was unclear as to whether they could be excluded with confidence or where it appeared inclusion criteria were met were then reviewed again with consideration of the full paper. A full-text review to establish whether the paper met the inclusion criteria was undertaken by the lead author and discussions took place with the project supervisor in

cases of doubt or ambiguity. Studies were reviewed thoroughly to extract relevant data for this systematic review.

Figure 3.1: Systematic Review Search
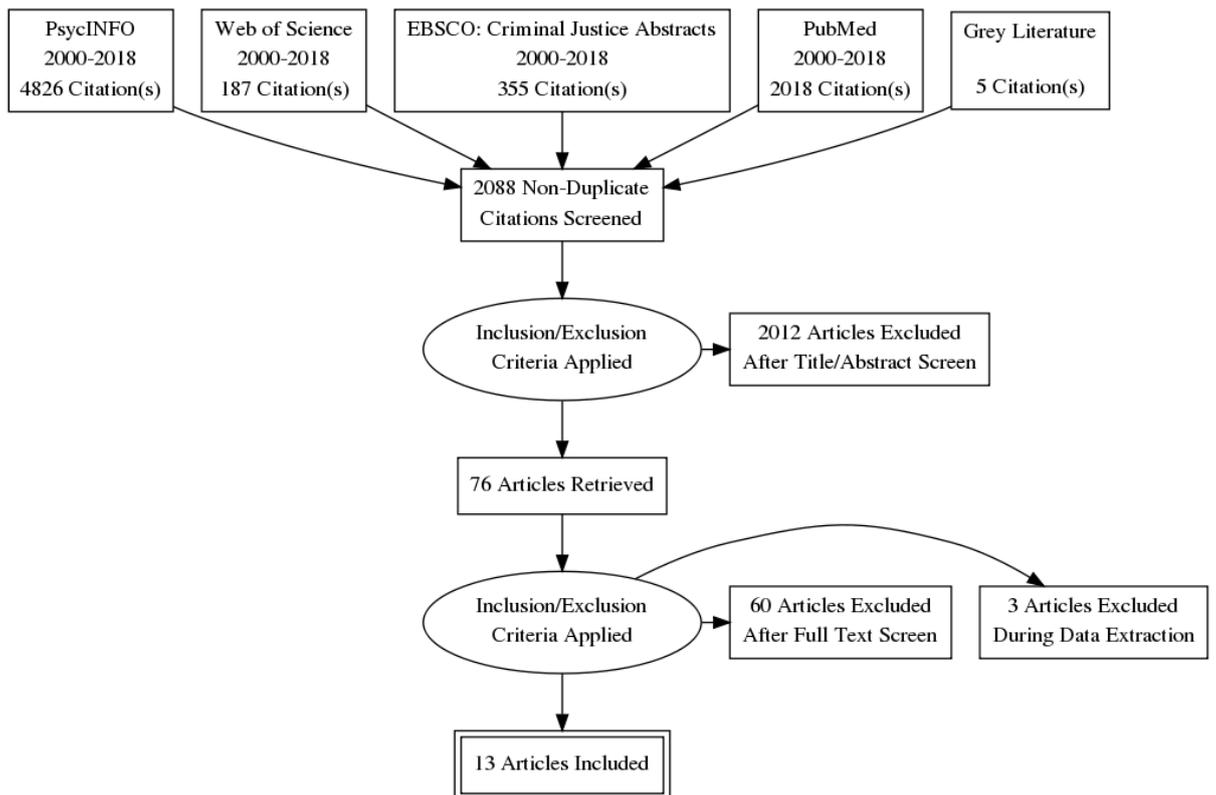
Data extraction method

Each study was thoroughly reviewed and relevant data were extracted and included within a brief data summary extraction form as well as the risk of bias form (see Appendix A for extraction forms). The papers were reviewed on three separate occasions by the lead author to ensure the data extracted was accurate.

Quality Assessment method

Research considered for inclusion within a systematic review needs to be evaluated in terms of their quality because "*if the 'raw material' is flawed, then the conclusions of systematic reviews cannot be trusted*" (Juni, Altman, & Egger, 2001). Although composite

quality scores have been used (e.g. Chalmers et al, 1981; Jadad et al, 1996), the approach has received criticism and support is greater for assessments that consider individual components of quality research (Berger, 2006; Juni, Altman, Egger, 2001). The Cochrane Consumers and Communication Group (CCCG) recommend a form of structured judgement using Cochrane methods which include consideration of individual components within domains (Higgins & Green, 2011; Ryan, Hill, Prictor, McKenzie, 2013). To guide clinical judgement and increase inter-rater reliability they provide documentation on how to GRADE the quality of evidence (Ryan & Hill, 2016). The GRADE system is used to rate the quality of evidence against five criteria. The criteria were risk of bias, inconsistency, indirectness, imprecision and publication bias. In order to ensure clear and consistent approaches to applying these criteria to psychological intervention studies, a checklist designed by Meader, et al., (2014), which is grounded in the Cochrane GRADE approach, has been employed.

Risk of bias is assessed on an individual study outcome basis (see Appendix B) and then is used to evaluate the overall quality of the systematic review evidence (see Appendix C). Imprecision, indirectness, inconsistency and publication bias are evaluated on the basis of the evidence combined within the systematic review. All RCTs started at a quality rating of 'high', as per guidance, and the rating was adjusted (e.g. by upgrading or downgrading) with reflection on each quality criterion.

Risk of Bias: The Cochrane Collaboration Risk of Bias Tool (CCRBT) (Higgins, et al, 2011) adapted to consider additional elements important for psychological interventions (e.g. fidelity checks) and guided by a checklist developed by Meader et al. (2014) was used to assess risk of bias. Given the nature of RCTs that involve psychological interventions as opposed to pharmacological interventions, it is highly unlikely any RCTs included in this study could be considered low risk. For example, it is highly unlikely within traditional psychological interventions that participants would not know they were engaging in an intervention and similarly the therapists delivering the intervention. Therefore, greater consideration is taken to the attempts the researchers have made to reduce bias, within the restraints of psychological interventions, and other aspects more closely linked to psychological interventions (e.g. fidelity checks) are closely evaluated.

Imprecision: This refers to effect size being considered imprecise when the sample is relatively small or there is a lot of variation in the intervention effect among participants (Ryan & Hill, 2016). Sample size, effect size and confidence intervals are considered to evaluate evidence of imprecision (Ryan & Hill, 2016).

Indirectness: This refers to how well the evidence answers the review question. It considers whether the population being investigated is only being partially captured, whether only specific versions of interventions are being evaluated, if comparators cannot truly be considered standard or routine care, and whether outcome measures were appropriate to evaluate the impact of the intervention (Ryan & Hill, 2016). Additionally, it considers whether direct comparisons (e.g. head to head) have been undertaken or lower quality indirect comparisons have been made (Ryan & Hill, 2016).

Inconsistency: This refers to the clinical and methodological heterogeneity (e.g. variation across studies) of the evidence included within the systematic review (Ryan & Hill, 2016). Consideration is taken as to whether there are differences across studies as a result of variation within participants, interventions, outcomes, or study design (Ryan & Hill, 2016).

Publication Bias: It is accepted that this is an area of concern with studies that find statistically significant findings more likely to be published than those that do not (Dickersin, 2005). Systematic reviews are therefore particularly vulnerable to presenting findings impacted by publication bias (Borenstein, Hedges, Higgins & Rothstein, 2009). When considering the quality of systematic reviews and their methods of countering publication bias Meader, et al., (2014) indicated, for example, the importance of a comprehensive search and grey literature being searched. This systematic review made efforts to mediate the impact of publication bias by searching four databases, grey literature and contacting authors and experts in the field to access any unpublished research and gain any additional data required. Although restrictions were placed on studies if they had no English translation available all studies that met criteria were included regardless of quality. Consideration was also taken to studies that may have the potential to be biased due to industry influence or professional affiliations with the therapeutic approach they are researching, such as "allegiance bias" (Luborsky, Singer, & Luborsky, 1975).

A narrative review of the included studies, which focus on psychological interventions and their effect on shame, has been conducted and a meta-analysis of the data within these studies has been undertaken. The meta-analysis was conducted to answer two questions: -

➢ Do psychological interventions reduce shame?
➢ Which psychological interventions are effective at reducing shame?

In order to establish whether psychological interventions were generally effective at reducing shame, all data that involved a psychological intervention were combined. The weighted mean effect size was calculated (Headrick, 2010):

$$V_{A_1} = \frac{m^2 V_1 + n^2 V_2 - nV_1 - nV_2 - mV_1 - mV_2 + mnV_1 + mnV_2 + mn(M_1 - M_2)^2}{(n+m-1)(n+m)}$$

(5.38)

Additionally, all control conditions (e.g. where no psychological intervention was involved) were combined separately. This data was combined to explore the influence that time, in the absence of psychological intervention, has in reducing shame. This data cannot reliably be used as a comparator but provides useful information in isolation.

Once data was combined into psychological intervention condition and control condition Hedges g was used to calculate the effect size for each condition (see table 3.5). As sample size varied across outcome assessment time points within studies, the Hedges g approach was used. Hedges g is considered an unbiased version of Cohen's d and can tolerate differences in sample size (Hedges 1981; Hedges & Olkin, 1985, Ellis, 2010). The equations used to calculate Hedge's g and the SD pooled required for the aforementioned calculation are presented below.

$$\text{Hedges' } g = \frac{M_1 - M_2}{SD^*_{pooled}}$$

$$SD*_{pooled} = \sqrt{\frac{(n_1 - 1)SD_1^2 + (n_2 - 1)SD_2^2}{n_1 + n_2 - 2}}$$

The paper also explored the size of the effect that specific types of psychological interventions have had on reducing shame (see table 3.6). In order to be able to consider the impact of each psychological intervention across studies, effect sizes were calculated for each condition. The Hedges g effect size was calculated for each condition.

<h1 align="center"><u>Results</u></h1>

This systematic review considered 7391 papers (including duplicates), of which 2088 abstracts and 76 full articles were reviewed in order to identify 13 studies that met inclusion criteria (Arimitsu, 2016; Braehler, Gumley, Harper, Wallace, Norrie, & Gilbert, 2012; Brazão, Motta, Rijo, Salvador, Pinto-Gouveia, & Ramos, 2015; Doyle, Tarrier, Shaw, Dunn, & Dolan, 2016; Ginzburg, et al., 2009; Gumley, Karatzias, Power, Reilly, McNay, & O'Grady, 2006; Harned, Korslund, & Linehan, 2014; Luoma, Kohlenberg, Hayes, & Fletcher, 2012; Neacsiu, Lungu, Harned, Rizvi, & Linehan, 2014; Øktedalen, Hoffart, & Langkaas, 2015; Resick, Galovski, O'Brien Uhlmansiek, Scher, Clum, & Young-Xu, 2008; Scherer, Worthington Jr., Hook, & Campana, 2011; Talbot, et al., 2011). A number of therapeutic interventions were not considered within this review due to the studies not employing randomised controlled trial methods. These interventions would benefit from more robust research approaches before being able to be considered within future reviews. The therapeutic interventions excluded include Eye Movement Desensitisation and Reprocessing (EMDR) therapy, emotion focussed therapy, drama therapy, cognitive experiential, Mindfulness Based Cognitive Therapy (MBCT) and art therapy.

The 13 studies included have been published between 2006 and 2016 and use a randomisation control design. Only five studies have an active intervention and a true waitlist comparator e.g. where no other psychological intervention is being accessed (Arimitsu, 2016; Braehler, et al., 2012; Brazão, et al., 2015; Ginzburg, et al., 2009; Gumley, et al., 2006). All other studies compared a psychological intervention of focus against other psychological interventions and Treatment as Usual conditions which involve different psychological interventions. The characteristics of these studies are summarised below and in table 3.3.

Table 3.3: Summary of Studies

Authors and year	Sample	Exclusion criteria	Measure of shame	Intervention (I)	Dosage	Comparator	Dosage
Arimitsu (2016)	Male & Female (Community & psych students with low self-compassion)	None reported	SCES (FU = 3 months)	Enhancing Self-Compassion Programme (ESP) (n=16)	Seven weekly 1.5hour group sessions	Waitlist (n=12)	N/A
Braehler et al (2012)	Male & Female (schizophrenia or bipolar with psychotic features)	1. Currently in psychotherapy 2. Unstable (e.g. unable to cope with residual psychotic symptoms) 3. Alcohol or substance use, 4. Risk to self or others, 5. Intellectual impairment	PBIQ-Revised	Compassion Focussed Therapy + TAU (CFT) (N=22)	16 weekly (2 hour) group sessions delivered over 4-5 months.	TAU (N=18)	No detailed dosage information
Brazao et al (2015)	Male (prisoners-no-sex offences)	1. Cognitive impairment 2. Psychotic disorders 3. Active substance use 4. Due to be released within 12 months. 5.Exclusively having sexual offences.	OAS	CIT group Growing Pro social (N=24)	Forty weekly 90-minute sessions	Wait list (N=24)	N/A
Doyle et al (2016)	Male (forensic PD)	1. Organic brain injury or neurocognitive problems 2. Actively psychotic 3. Due to be transferred 4. In long term seclusion	YSQ - defectiveness-shame (FU = 36 month from baseline)	Schema Focussed Therapy (N=29) + TAU	60-minute weekly individual sessions for minimum of 18 months	TAU (N=34)	No detailed dosage information

Ginzburg et al, 2009	Female (Community)	1. Victim of ritualised sexual abuse	ARBQ – shame subscale	Trauma-Focussed Group Therapy (TFGT) (n=55)	24 weekly group sessions of 90 mins.	Present-Focussed Group Therapy (PFGT) (n=56)	24 weekly group sessions of 90 mins.
		2. Currently in psychotherapy				Waitlist (n=55)	N/A
		3. Suicidal					
		4. DSM IV disorders: schizophrenia, psychotic disorder, dementia, delirium, amnestic or other cognitive difficulties					
Gumley et al (2006)	Male & Female (Schizophrenia or related disorder at risk of relapse in UK)	1. Non-English speaker	PBIQ shame subscale	CBT for psychosis (N=72)	Phase 1 (engagement): 5 sessions delivered over 12 weeks.	Antipsychotic medication TAU (N=72)	No dosage information.
		2. Organic brain disorder					
		3. Significant learning disability	*(FU = 12 months from baseline)*				
		4. Severe positive psychotic symptoms			Phase 2 (when symptoms present): 2 to 3 sessions per week - maximum of 16.		
		5. Primary drug or alcohol dependence disorder					
		6. Currently accessing psychotherapy					

Harned et al. (2014)	Female (BPD, PTSD, Self-Injury)	1. Psychotic disorder bipolar disorder, or mental retardation 2. Legally mandated to treatment 3. Required primary treatment for another debilitating condition (e.g. life-threatening anorexia nervosa).	ESS *(FU = 3 months post)*	DBT + DBT prolonged exposure (N=17)	One combined individual session per week: 90 minutes of the DBT PE protocol and 30 minutes of DBT *Or* Two individual sessions per week: one DBT PE protocol session of 90 minutes and one DBT session 1 hour.	DBT (N=9)	One individual (1hr) & one (2.5hr) grp weekly for a year
Luoma et al (2012)	Male & Female (substance use disorder)	1. Due to be discharged 2. Severe cognitive impairment	ISS *(FU = 4 months post)*	ACT for shame + TAU (N=68)	3 (2 hour) group sessions over 1 week	TAU (residential addiction treatment) (N=65)	Approx. 120 hours group sessions over 28 days
Neacsiu et al (2014)	Female (BPD and self-harm)	1. Schizophrenia / schizoaffective disorder / bipolar disorder / psychotic disorder not otherwise specified 2. Mental retardation 3.Seizure disorder requiring medication, 4. Mandated to treatment 5. Treatment needed for another primary debilitating condition.	PFQ-2 shame subscale *(FU = 12 months post)*	DBT (N=52)	Weekly: 1-hour individual session and 2.5 hours group session over 12 months.	Community treatment by experts (N=49)	Dosage not prescribed but a minimum of 1 scheduled individual session per week delivered

Oktedalen et al (2015)	Male & Female (PTSD & comorbid issues)	1. Suicide risk 2. Current psychosis 3. Extensive dissociative symptoms 4. Ongoing trauma (e.g. currently in an abusive relationship)	Own mixed measure	Prolonged Exposure (N=32)	10 sessions over 12 weeks	PE & image re-scripting (N=33)	10 sessions over 12 weeks
Resick et al (2008)	Female (PTSD – sexually/physically assaulted in USA)	1. Illiteracy 2. Current psychosis 3. Suicidal intent 4. Dependence upon drugs or alcohol 5. Currently in an abusive relationship or being stalked	ESS *(FU = 6 months post)*	Cognitive processing (N = 56)	12 hours: 1-hour individual session twice weekly.	Cognitive therapy (N=51) Written accounts (N=55)	12 hours: 1-hour individual session twice weekly. 12 hours: First week two 1-hour sessions and thereafter one weekly 2-hour session.
Scherer et al (2011)	Male & Female (substance users resulting in court mandates)	Unclear	PFQ-2 shame subscale *(FU = 3 weeks post)*	Self-forgiveness intervention + TAU (N=41)	4 hours: 90 min sessions delivered over 3 weeks	TAU waitlist (Alcohol treatment protocol) (N=38)	No dosage informatio n

Talbot et al (2011)	Female (major depression & history childhood sexual abuse)	1. Active psychosis 2. Current access to psychotherapy 3. History of schizophrenia / bipolar disorder / intellectual disability 4. Substance abuse or dependence within the previous three months	DES	Interpersonal psychotherapy (N = 37)	16 individual sessions delivered over 36-weeks.	Usual care psychotherapy (N = 33)	No details

Abbreviations: *Abuse Related Beliefs Questionnaire (ARBQ); Differential Emotions Scale (DES); Experience of Shame Scale (ESS); Internalised Shame Scale (ISS); Other As Shamer scale (OAS); Personal Beliefs about Illness Questionnaire - Revised (PBIQ-R); Personal Feelings Questionnaire (PFQ-2); Self Conscious Emotions Scale (SCES); Young's Schema Questionnaire (YSQ); Acceptance and Commitment Therapy (ACT); Cognitive Behaviour Therapy (CBT); Cognitive Interpersonal Therapy (CIT); Dialectical Behaviour Therapy (DBT); Prolonged Exposure (PE); Treatment As Usual (TAU); Follow up assessment (FU).*

Study characteristics

Sample characteristics

The studies included have maximum samples for individual interventions of between 9 (Harned et al, 2014) and 72 participants (Gumley, et al, 2006). Five of the studies have female only samples (Ginzburg, et al., 2009; Harned, et al., 2014; Neacsiu, et al., 2014; Resick, et al., 2008; Talbot, et al., 2011), six studies consider both genders (Arimitsu, 2016; Braehler, et al., 2012; Gumley, et al., 2006; Luoma, et al, 2012; Øktedalen, et al., 2015; Scherer, et al., 2011) and two studies contain a male-only sample (Brazão, et al., 2015; Doyle, et al. 2016). The majority of participants have been those with psychiatric diagnoses. For example, Personality Disorder (PD), including Borderline Personality Disorder (BPD), Post Traumatic Stress Disorder (PTSD), major depression, and Schizophrenia and related disorders. Two studies focused on substance abusers and two studies include forensic samples. Several studies also include participants with complex comorbid issues such as those with a history of childhood sexual abuse, victims of sexual and physical assaults, and individuals with a history of self-harming behaviours, including

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attempted suicide. One study included a non-clinical community sample, such as individuals with low levels of self-compassion.

Treatment modality

A number of different therapeutic approaches have presented within this systematic review of interventions that reduce shame. They include cognitive therapy, behaviour therapy (e.g. prolonged exposure), CBT approaches, '3rd wave CBT' approaches (E.g. DBT, CFT, ACT), Interpersonal Psychotherapy, Trauma-Focussed Group Therapy, Present-Focused Group Therapy, and various combinations of these. For example, four interventions are combined with Treatment as Usual based interventions, one study combines DBT and prolonged exposure and another combines prolonged exposure and image rescripting.

Behavioural approaches: Two studies include a total of three interventions that involve a behavioural technique. One study represents a predominantly behavioural therapy-based modality. This study evaluated Prolonged Exposure as a method of reducing shame. Exposure therapy involves exposing an individual to stimuli that evokes the problem affect (e.g. shame) so that the distressing experience reduces. This same study also combined prolonged exposure with a cognitive strategy e.g. image rescripting, which resulted in a combined technique where individuals can rescript the image with more helpful cognitions whilst being exposed to it (Øktedalen, et al., 2015). A second study included a DBT intervention with the addition of prolonged exposure (Harned, et al., 2014).

Cognitive, Cognitive Interpersonal and Cognitive Behavioural Therapy approaches: One study evaluated cognitive therapy specifically exploring cognitive processing and the cognitive therapy and written account elements separately (Resick, et al., 2008). One study evaluates a cognitive interpersonal therapy (CIT) group, which was designed to promote change in particular dysfunctional core beliefs (e.g. antisocial attitudes within a sample of

individuals that had committed sexual offences) about the self and others, which underlie social information processing (e.g. schemas) (Brazão, et al., 2015). One study evaluated a standard CBT group which was adapted to target problem cognitions and behaviours within their sample group e.g. unhelpful cognitions associated with psychosis (Gumley, et al., 2006). Finally, one study evaluated Schema Focussed Therapy (SFT) (Doyle, et al., 2016), which increases awareness of how early maladaptive schemas (e.g. defectiveness shame) develop and impact on future thoughts and feelings about the self, others and the world around them.

3rd wave CBT approaches: Nine studies evaluated therapies commonly referred to as 3rd wave CBT approaches. Two studies evaluated Dialectical Behaviour Therapy (Harned, et al., 2014; Neacsiu, et al., 2014). It has been adapted from traditional CBT approaches to meet the needs of individuals who experience intense emotions (e.g. those with Borderline Personality Disorder). Two studies evaluated Compassion Focused Therapy (CFT) (Arimitsu, 2016; Braehler, et al., 2012), one of which is referred to as the Enhancing Self Compassion Programme (ESP) but is based on CFT principles (Arimitsu, 2016). CFT based therapies focus on increasing self-awareness, recognition of shared humanity and self-kindness. A further study evaluated a therapy that reflected a compassion and self-forgiveness-based approach (Scherer, et al., 2011). Finally, one study evaluated Acceptance and Commitment Therapy (ACT) (Luoma, et al., 2012). This intervention uses acceptance and mindfulness strategies, together with commitment and behaviour change strategies to increase psychological flexibility.

Trauma and present focused approaches: One study used therapeutic approaches which are focussed on the trigger for distress and appear to reflect a combination of therapeutic styles (Ginzburg, et al., 2009). Trauma-Focused Group Therapy (TFGT) focuses on the link between current symptomology and past traumatic events and therefore considers that working through past events will reduce current issues. Present-Focused Group Therapy (PFGT) focusses on the link between current symptomology and current distress and

therefore attempts to reduce symptomology by addressing current maladaptive behaviours.

Interpersonal psychotherapy approaches: One study evaluated interpersonal psychotherapy (IPT) which combines psychodynamic approaches with a CBT informed structure (Talbot, et al., 2011). It is a time-limited therapy that focusses on interpersonal issues and symptomatic recovery.

Treatment as usual approaches: Five studies evaluated treatment as usual conditions which included alternative psychological interventions. Two studies include psychotherapy conditions. The first gave psychotherapists flexibility with modality and post-treatment questionnaires described the approaches used as supportive, CBT or DBT based, integrated and eclectic or client centred (Talbot, et al., 2011). The second described the therapists as experts in the treatment of 'difficult patients' working primarily within non-cognitive and non-behavioural therapy approaches (Neacsiu, et al., 2014). Two studies include substance use protocol interventions, with one being a 28-day residential based intervention (Luoma, et al., 2012) and the second being an outpatient intervention (Scherer, et al., 2011). One study involved Cognitive Behavioural Treatment groups designed to address risk factors associated with offending (Doyle, et al., 2016).

Delivery method and dosage

Including both interventions and comparators that include alternative psychological interventions, there were a total of 23 separate intervention-based data sets that measured shame pre and post-treatment. Of the 23 psychological interventions (active intervention and intervention-based comparators) the most common approaches used were group therapy (eight studies covering 10 interventions) (Arimitsu, 2016; Braehler, et al., 2012; Brazão, et al., 2015; Doyle, et al., 2016; Ginzburg, et al., 2009; Gumley, et al., 2006; Luoma, et al., 2012; Scherer, et al., 2011), individual therapy (four studies covering

8 interventions) (Neacsiu, et al., 2014; Øktedalen, et al., 2015; Resick, et al., 2008; Talbot, et al., 2011), and two studies (Harned, et al., 2014; Neacsiu, et al., 2014) with three interventions included both group and individual aspects to the therapeutic interventions (e.g. DBT). Finally, two interventions were unclear as to how they were delivered (e.g. alcohol programme protocol and forensic hospital settings) (Doyle, et al., 2016; Scherer, et al., 2011). The studies evaluated interventions where a therapeutic relationship was involved, which reflects the importance of the therapeutic relationship in facilitating change (Norcross & Wampold, 2011).

The therapies vary in relation to their maximum delivery time from an equivalent of approximately 4 hours (Scherer, et al., 2011) to around 200 hours (e.g. Harned, et al., 2014; Neacsiu, et al., 2014) facilitated over a period of between 1 week and 18 months. Four longer-term interventions include DBT, DBT-PE, SFT, CIT, Psychotherapy by experts and substance use residential treatment. This group represents therapies that vary in length from approximately a total of 56 hours (Neacsiu, et al., 2014) to approximately 200 hours (Harned, et al., 2014; Neacsiu, et al., 2014). Moderate length interventions included IPT, TFGT, PFGT, CFT, PE, CPT, and CBT for psychosis. Moderate length therapies varied in length from approximately 36 hours (Ginzburg, et al., 2009; Talbot, et al., 2011) and 16 hours (Gumley, et al., 2006). The short-term interventions included ACT, ESP, and the self-forgiveness group. Short term therapies were delivered over a maximum of approximately 10 hours (Armitsu, 2016) to a minimum of 4 hours (Scherer, et al., 2011). It is unclear how long interventions were for outpatient substance use psychotherapy or treatment as usual offending behaviour programmes (Doyle, et al., 2016; Scherer, et al., 2011).

Treatment fidelity

Methods to maintain treatment quality and fidelity vary across the studies (see table 3.4: risk of bias - other bias). Those that presented with the highest risk in terms of treatment fidelity included one study where the lead researcher delivered the treatment intervention and no external fidelity checks were undertaken (Gumley, et al., 2006). Those with the

lowest level of risk included a study that video/audio recorded all sessions and selected a reasonable proportion of these at random (Resick, et al., 2008). These randomly selected sessions were reviewed by external experienced therapists and the therapists observed were then rated in terms of adherence to therapy approach and therapy skills. Additionally, the same study also ensured a high level of experience of the therapists in the particular mode of therapy by ensuring the therapists that demonstrated high levels of competence prior to delivering therapy sessions which were included in the study.

Outcome measure

Of the thirteen studies included, seven assessed shame as a primary outcome measure (Brazão, et al., 2015; Doyle, et al., 2016; Ginzburg, et al., 2009; Gumley, et al., 2006; Luoma, et al., 2012; Neacsiu, et al., 2014; Scherer, et al., 2011) and six assessed shame as a secondary outcome measure (Arimitsu, 2016; Braehler et al., 2012; Harned, et al., 2014; Resick, et al., 2008; Øktedalen, et al., 2015; Talbot et al., 2011). The studies used a range of outcome measures to evaluate shame, with no measure presenting as the most dominant. However, all measures are self-report and have been considered to have satisfactory psychometric properties, albeit each has its limitations. Additionally, the measures conceptualise shame from differing perspectives. For example, placing greater focus on measuring shame from either a respondent's emotional experience or cognitive experience. Five studies use measures that focus predominantly on shame as an emotion (e.g. PFQ-2, ESS, DES, SCES), five studies use measures that focus predominantly on shame as a cognition (e.g. PBIQ, OAS, YSQ, ARBQ, PTCI, TRGI, TRSI), and one study uses measures that focus on shame predominantly from a combined emotional, cognitive and behavioural perspective (e.g. ISS). All of the measures also require some level of self-awareness and an ability to recognise their own emotional experiences, thought processes and/or behaviours. For example, the Personal Feelings Questionnaire-2 (PFQ-2) (Harder & Zalma, 1990) requires the respondent to recognise that they have experienced a sense of 'self-consciousness' and the Experience of Shame Scale (ESS) (Andrews, Qian, & Valentine, 2002) requires an individual to be able to be aware of what shame feels like (e.g. have you felt ashamed of …). Although these different measures may not be ideally combined, the

range of shame measures may help to encapsulate different aspects of shame and whether each aspect of shame can be impacted by psychological interventions. Due to the complexity involved in defining and measuring shame each of the measures of shame used within these studies is summarised in more detail as well as how each study used each measure.

Two studies (Harned, et al., 2014; Resick, et al., 2008) used the Experience of Shame Scale (ESS) (Andrews, Qian, & Valentine, 2002). The ESS consists of 25 items which describe situations connected to feelings of shame (e.g. Have you felt ashamed of any of your personal habits? Have you felt ashamed of the sort of person you are?) and asks how frequently these have occurred on a 1-4 Likert scale (1 = not at all and 4 = very much). Both studies that used this measure calculated a total score with 100 being the maximum total scale score.

Two studies (Neacsiu, et al., 2014; Scherer, et al., 2011) used the Personal Feelings Questionnaire-2 (PFQ-2) (Harder & Zalma, 1990). This measure is a self-report 16-item adjective checklist (e.g. self-consciousness, feeling "stupid", feeling "ridiculous") with participants asked how frequently they experience them on a 0-4 Likert scale (1= I do not experience the feeling and 4 = I experience the feeling very strongly). Ten items relate to shame. One study (Neacsiu et al, 2014) appeared to calculate the average shame score across the ten items (e.g. 4 being the maximum total scale score), however, this is not clear within the paper. The second study (Scherer, et al., 2011) referred to the PFQ-2 as a 22-item measure and indicated only 6 items loaded on the shame subscale. It, however, used the same 0-4 Likert scale. It appears that the reference used for the PFQ-2 within the paper is actually the reference for the first version of the PFQ (Harder and Lewis, 1987). It is unclear where the error lies within this studies version of the PFQ but it assumes a total subscale score of a maximum of 24 within this specific study.

The Personal Beliefs about Illness Questionnaire (PBIQ) (Birchwood, Mason, MacMillan, & Healy, 1993) and the PBIQ-revised (Birchwood, Jackson, Brunet, Holden, & Barton, 2012)

were used in two studies (Braehler et al, 2012; Gumley, et al, 2006). The PBIQ is a 16-item self-report measure and assesses an individual's beliefs across five domains, one of which is the shame domain which included 3 items (Gumley, et al, 2006). The participants rate on a 4-point Likert scale (1 = strongly disagree and 4 = strongly agree) indicating 12 would be the maximum total subscale score. Some caution should be taken as it is referred to as 'stigma' in the original PBIQ measure however was later referred to as shame by the authors of the original measure when revising the PBIQ-R (Birchwood, Jackson, Brunet, Holden, & Barton, 2012). The PBIQ-revised resulted in there being 20-items across the five domains with 4 items in the shame subscale, resulting in a maximum score of 16.

Two studies used the measures they had designed themselves. The first used the shame subscale of the Abuse-Related Beliefs Questionnaire (ARBQ: Ginzburg, et al., 2006). The shame subscale includes 6 items (e.g. When I think of the traumatic experiences I had, sometimes I feel dirty), where respondents are asked to rate how much they agree with each statement on a 5-point Likert-scale (1 = strongly agree and 5 = do not agree at all). The scores are reversed so that higher scores reflect higher shame and a mean score is calculated (Ginzburg et al, 2009). The second study used the shame subscale of the Self-Conscious Emotion Scale (SCES: Arimitsu, 2005). Information about this measure is limited due to an English translation of the measure not being available; however, items are rated on a 4-point Likert scale (1 = never felt and 4 = clearly felt).

One study (Luoma, et al., 2012) used the Internalised Shame Scale (ISS) (Cook, 1987: Cook, 1994, 2001). The ISS is a 30 item self-report measure, which includes a 24-item shame subscale. Participants are asked to rate each self-statement (e.g. I would like to shrink away when I make a mistake; At times I feel so exposed that I wish the earth would open up and swallow me) on a 0-4 Likert scale (0 = Never and 4 = Almost always). Due to a clerical error in the included study that used the ISS, they instead used a 1-7 Likert scale (1 = Never and 7 = Always). Therefore, the maximum total shame score would be 168 rather than the traditional 96 within the ISS shame subscale.

The Other As Shamer (OAS) scale (Allan, Gilbert & Goss, 1994; Goss, Gilbert, & Allan, 1994) was used in one study (Brazão, et al., 2015). The OAS was a modification of the ISS where the focus was shifted on to how others viewed them rather than how they viewed themselves. It is an 18-item self-report measure. Participants were instructed to rate each statement (e.g. I think that other people look down on me; Other people always remember my mistakes) on a 0-4 Likert scale (0 = never and 4 = almost always). A maximum of 72 can be gained as a total shame score.

One study (Doyle, et al., 2016) included the Young Schema Questionnaire-2 (YSQ-2) (Young and Brown, 2001). This self-report questionnaire contains a number of items that measure various early maladaptive schemas. Five items measure the Defectiveness/shame schema. Respondents consider each statement (e.g. I feel that I'm not lovable; No man/woman I desire could love me once he/she saw my defects) and rate how true they are on a 1-6 Likert scale (1 = completely untrue of me and 6 = describes me perfectly). The maximum total score would be 30 within the defectiveness/shame subscale.

One study (Talbot, et al., 2011) used the Differential Emotions Scale (DES) (Izard, Libero, Putnam, & Haynes,1993) which contains a shame subscale with 3 items (e.g. Feel embarrassed when anybody sees you make a mistake). It is indicated that respondents were asked to report the frequency that they experienced shame in daily life on a 5-point Likert scale (1 =never and 5 = very often). Possible scores ranged from 3-15 (Talbot, et al., 2011). Although the DES is an established measure it includes the small number of items in the shame subscale and this does present with issues in terms of its ability to accurately measure shame. In fact, measures that have a small number of items are often criticised for not capturing the construct, having poor sensitivity (as there are fewer points of discrimination) and limits internal consistency assessments (Nunnally, 1978). However, there is evidence that short-form measures, including single item measures, can perform just as well as longer measures and have adequate validity and reliability (Wanous,

Reichers, Hudy, 1997: Zimmerman, Ruggero, Chelminski, Young, Posternak, Friedman, et al. 2006).

Finally, one study (Øktedalen, et al., 2015) used a measure of shame that incorporated 5 items from three established measures to create a short shame measure. One item (e.g. There is something about me that made the event happened) was selected from the post-traumatic cognition scale inventory (PTCI) (Foa, Ehlers, Clark, Tolin, & Orsillo, 1999), one item (e.g. I had some feelings and I should not have) was taken from the trauma-related guilt inventory (TRGI) (Kubany, Haynes, Abueg, Manke, Brennan, & Stahura, 1996.), and three items (e.g. If others knew what had happened to me, they would look down on me) were selected from the trauma-related shame inventory (TRSI) (Øktedalen, Hagtvet, Hoffart, Langkaas, & Smucker, 2014). The authors considered the TRGI item to be more closely linked with shame than guilt as it placed blame on self rather than a person's actions. Although this measure of shame raised concerns it does include items from established measures and the authors found that the Cronbach Alpha within the study was .77 (Øktedalen, et al., 2015). This short form shame measure assessed shame on an 11-point Likert scale (0 = does not match at all and 10 = match completely) and therefore 50 would be the maximum total score. Some caution, with regards to this measure of shame, is likely warranted.

Outcome assessment time points

Only half of the studies evaluated the outcome measure beyond the post-treatment time point (Arimitsu, 2016; Doyle, et al., 2016; Harned, et al., 2014; Luoma, et al., 2012; Neacsiu, et al., 2014; Scherer, et al., 2011). Each of these studies used different follow-up periods. With follow up assessments taking place between 3 weeks post-treatment (Scherer, et al., 2011) and 18 months post treatment (Doyle, et al., 2016).

Study Quality

Each of the studies included in this systematic review have been conducted in a manner designed to reduce bias. Risk of bias was evaluated for each study. Selection bias, performance bias, detection bias, attrition bias, reporting bias, and other biases were considered alongside the likely impact (e.g. sample size) (see table 3.4 for details). However, the overall level of bias within each study varies from being assessed as a low-moderate risk of bias to a moderate-high risk of bias. Across the studies, it is noted that the majority of bias markers were unclear or moderate risk levels, with approximately 5% high-risk markers. Only around 20% of risk markers were rated low risk. There were a number of risk markers that demonstrate a lack of detailed reporting or the need for improvement within study design

Table 3.4: Quality Assessment – Risk of Bias and Overall Study Quality.

Risk of Bias

	Allocation *(Selection bias: e.g. random sequence generation- baseline difference / allocation concealment)*	Blinding (performance bias / detection bias)	Incomplete outcome data *(e.g. attrition bias)*	Selective reporting *(e.g. reporting bias)*	Other potential sources of bias *(e.g. Treatment fidelity)*	Other potential sources of bias	*Overall Quality Rating*
Braehler et al	Low/Low	Low/Low	Moderate	Unclear	Unclear	Moderate	**Moderate-High**
Brazao et al	Low/Low	Unclear/Unclear	Low	Unclear	Moderate	Moderate	**Moderate-High**
Arimitsu	Unclear/Low	Unclear/Unclear	Moderate	Unclear	Unclear	Moderate	**Moderate**
Doyle et al	Low/Low	Unclear/Unclear	High	Unclear	Moderate	Moderate	**Moderate**
Ginzburg et al	Unclear/Low	Unclear/Unclear	Moderate	Unclear	Unclear	Moderate	**Moderate**
Gumley et al	Low/Low	Unclear/Moderate	Low	Unclear	High	Moderate	**Moderate**
Luoma et al	Moderate/Unclear	Unclear/Unclear	Moderate	Unclear	Low	Low	**Moderate**
Resick et al	Unclear/Unclear	Unclear/Unclear	Moderate	Unclear	Low	Moderate	**Moderate**
Talbot et al	Unclear/Unclear	Unclear/Unclear	Moderate	Unclear	Low-Moderate	Moderate	**Moderate**
Harned et al	Unclear/Unclear	Unclear/Low	High	Low	Low-Moderate	High	**Low-Moderate**

Neacsiu et al	Unclear/High	Unclear/Unclear	High	Moderate	Unclear	Moderate	**Low-Moderate**
Oktedalen et al	Moderate/Low	Unclear/Unclear	Moderate	Moderate	Moderate	Moderate	**Low-Moderate**
Scherer et al	Unclear/Unclear	Unclear/Unclear	Moderate	Moderate	Moderate	Moderate	**Low-Moderate**

Psychological intervention and impact on outcome (shame).

Do psychological interventions reduce shame?

To establish whether psychological intervention is effective at reducing shame, the active interventions across the data set within each of the studies were combined to establish an overall mean effect size. See table 3.5 for details. There was a moderate level of heterogeneity found between studies (TAU^2 = 0.05, Chi^2 = 36.44, df = 20, p = 0.01, I^2 = 45%) and therefore some caution should be taken with the systematic review findings (Higgins, Thompson, Deeks, & Altman, 2003). Psychological interventions reduce shame from pre to post-treatment (Hedges g = 0.22) and an even greater effect size was evident at follow up (Hedges g = 0.42). However, caution should be taken when comparing these two time points given the latter has a smaller sample size.

Table 3.5: Combined Psychological Intervention: Effect Sizes

Intervention	No. of studies (conditions)	Combined Pre	Combined Post / Follow Up	Effect size g
All active Intervention Pre-Post	_Pre-Post = 20 conditions_	M = 35.08 SD = 34.76 N = 866	M = 27.76 SD = 30.58 N = 775	0.22
All active Intervention Pre-Follow up only	_Pre-FU only = 11 conditions_	M = 56.18 SD = 36.09 N = 427	M = 41.99 SD = 30.49 N = 288	0.42

In order to consider how shame changes over time in the absence of any psychological interventions the 5 control conditions within the studies included in this review were

combined. Overall there was little change in shame between time one (M=10.9, SD= 9.46, N=170) and time two (M=11.71, SD= 11.01, N=170) with a negligible effect size (g= 0.08).

Which psychological interventions are effective at reducing shame?

As studies include alternative psychological interventions as comparators as well as true waitlist comparators the effect size pre-post treatment has been calculated for each active intervention and non-psychological intervention comparators (e.g. waitlist and non-psychotherapy TAU conditions) (see table 3.6 for details). All active intervention conditions, excluding one, indicate a reduction in shame. Effect sizes range from 0.15 to 1.98 (Hedges g). The treatment as usual, alcohol abuse psychotherapy condition, resulted in an increase in shame with a 0.29 effect size. Doyle et al (2016) also indicated an increase in shame post-treatment (effect -2.47, SE .93, p .008) but further data was unavailable and therefore this data could not be included within the meta-analysis. Active interventions that also included a follow-up time point demonstrated effect sizes between 0.49 and 1.5 (Hedges g). Within the five non-psychological intervention-based conditions, four conditions (waitlist, antipsychotic medication, and community mental health support) had no impact on shame (Hedges g = 0.027-0.056) and one condition (waitlist) resulted in an increased level of shame with a moderate effect size (Hedges g = 0.534).

Table 3.6: Effect of Interventions (within group effect sizes)

Intervention	Author	Pre	Post	FU	Pre -post effect size g	Pre-FU effect size g	Study Quality rating
CIT Growing Prosocial group	Brazao et al	M = 24.83 SD = 10.22 N = 24	M = 22.33 SD = 13.98 N = 24	-	0.204		**Moderate-High**
Compassion Focused Therapy (CFT)	Braehler et al	M = 14 SD = 3.8 N = 22	M = 13.4 SD = 3.5 N = 17		0.163		**Moderate-High**
Interpersonal Psychotherapy	Talbot et al	M = 10.14 SD = 2.4 N = 70	M = 7.5 SD = 3.51 N = 70	-	0.878		**Moderate**

Enhancing Self Compassion (ESP)	Arimitsu *(FU = 3mths)*	M = 29.63 SD = 5.97 N = 16	M = 25.13 SD = 6.13 N = 16	M = 24.94 SD = 6.03 N = 16	0.744	0.782	**Moderate**
Cognitive therapy	Resick et al *(FU = 6mths)*	M = 57.72 SD = 17.64 N = 47	M = 46.16 SD = 15.28 N = 38	M = 46.97 SD = 15.15 N = 36	0.695	0.647	**Moderate**
Cognitive processing	Resick et al *(FU = 6mths)*	M = 58.79 SD = 16.45 N = 52	M = 49.49 SD = 17.87 N = 42	M = 47.36 SD = 16.14 N = 44	0.544	0.701	**Moderate**
Written accounts	Resick et al *(FU = 6mths)*	M = 61 SD = 19.96 N = 50	M = 54.09 SD = 20.42 N = 35	M = 46.71 SD = 15.26 N = 38	0.343	0.790	**Moderate**
ACT for shame	Luoma et al *(FU = 4mths)*	M = 88.14 SD = 25.43 N = 68	M = 83.31 SD = 21.76 N = 60	M = 71.64 SD = 24.12 N = 30	0.203	0.659	**Moderate**
Present Focused Group Therapy	Ginzburg et al	M = 4.00 SD = 0.87 N = 43	M = 3.44 SD = 0.88 N = 43		0.640		**Moderate**
Trauma Focused Group Therapy	Ginzburg et al	M = 3.61 SD = 0.90 N = 42	M = 3.14 SD = 1.1 N = 42		0.468		**Moderate**
Residential addiction treatment program (TAU)	Luoma et al	M = 86.78 SD = 26.69 N = 65	M = 74.97 SD = 30.27 N = 53	M = 80.54 SD = 31.28) N = 29	0.416	0.28	**Moderate**
Usual Care Psychotherapy	Talbot et al	M = 10.01 SD = 3.26 N = 70	M = 8.86 SD = 3.73 N = 70		0.328		**Moderate**
CBT-psychosis	Gumley et al	M = 7.2 SD = 2.1 N = 72	M = 6.9 SD = 1.8 N = 72	-	0.153		**Moderate**
DBT + PE	Harned at al *(FU = 3mths)*	M = 87.7 SD = 10.5 N = 17	M = 61.8 SD = 16.1 N = 12	M = 65.3 SD = 19.6 N = 12	1.981	1.503	**Low-Moderate**
DBT	Harned et al *(FU = 3mths)*	M = 84.1 SD = 13.7 N = 9	M = 67.7 SD = 15.3 N = 6	M = 66 SD = 15.2 N = 6	1.144	1.266	**Low-Moderate**

Intervention	Author						Quality
Prolonged exposure	Oktedalen et al	M = 49.71 SD = 26.39 N = 28	M = 26.14 SD = 25.93 N = 28	-	0.900		**Low-Moderate**
Community treatment by experts	Neacsiu et al *(FU = 12mths)*	M = 2.43 SD = 0.64 N = 31	M = 2.11 SD = 0.63 N = 23	M = 1.87 SD = 0.66 N = 21	0.503	0.864	**Low-Moderate**
Prolonged exposure with image re-scripting	Oktedalen et al	M = 40.2 SD = 24.2 N = 30	M = 22 SD = 20.94 N = 30	-	0.804		**Low-Moderate**
DBT	Neacsiu et al *(FU = 12mths)*	M= 2.19 SD = 0.68 N = 31	M = 1.9 SD = 0.48 N = 28	M = 1.87 SD = 0.56 N = 26	0.488	0.509	**Low-Moderate**
Self-forgiveness	Scherer et al *(FU = 3wks)*	M = 16.34 SD = 7.47 N = 41	M = 14.87 SD = 6.15 N = 38	M = 13.07 SD = 5.36 N = 30	0.214	0.490	**Low-Moderate**
Alcohol Abuse psychotherapy (TAU)	Scherer et al	M = 16.66 SD = 7.05 N = 38	M = 18.68 SD = 6.86 N = 28	-	*0.289 **		**Low-Moderate**
Non-psychotherapy-based interventions and waitlist conditions							
Community Mental Health (TAU)	Braehler et al	M = 14.6 SD = 3.1 N = 18	M = 14.5 SD = 4.3 N = 18		0.027		**Moderate-High**
Waitlist control	Brazao et al	M = 23.13 SD = 9.7 N = 24	M = 29.04 SD = 12.28 N = 24	-	*0.534 **		**Moderate-High**
Waitlist control	Arimitsu *(FU = 3mths)*	M = 30.42 SD = 8.45 N = 12	M = 30.75 SD = 8.45 N = 12	M = 29.92 SD = 8.21 N = 12	*0.039**	0.060	**Moderate**
Waitlist control	Ginzburg et al	M = 3.77 SD = 0.81 N = 44	M = 3.67 SD = 0.94 N = 44		0.044		**Moderate**
Antipsychotic meds (TAU)	Gumley et al	M = 7 SD = 1.8 N = 72	M = 7.1 SD = 1.8 N = 72	-	*0.055**		**Moderate**

* effect size due to an increase in shame from baseline

The quality assessments for each individual study highlighted that studies ranged from low-moderate quality to moderate-high quality (see table 3.4 & 3.6). Approximately a third of the conditions came from studies considered to be low-moderate quality and two-thirds evaluated conditions came from studies considered moderate to moderate-high quality. Studies of moderate-high quality are consistent that interventions have a small effect on shame, whilst moderate and low-moderate quality studies were less consistent, indicating small to large effects on shame (see table 3.6).

Table 3.7: Summary of Systematic Review Quality (GRADE)

Quality assessment						
No. of studies	**Study design**	**Risk of Bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Quality**
13	RCT	⊕⊕⊕∘ Moderate	⊕⊕⊕∘ Moderate	⊕⊕⊕∘ Moderate	⊕⊕⊕∘ Moderate	⊕⊕⊕∘ Moderate

The systematic review overall quality assessment is considered to be at a moderate level (see table 3.7). We are therefore moderately confident in the effect estimate. This suggests that the findings are valuable but should be reviewed with caution. This is particularly noted given the heterogeneity of interventions included within this review. However, there are common factors within these interventions such as an acknowledgement and validation of the distress the individual experiences and a level of shame exposure in the presence of a supportive other (e.g. therapist).

Discussion

The results indicate that overall psychological interventions can be effective at reducing shame. Additionally, in the absence of psychological intervention, such as within control conditions, no reduction in shame was consistently observed. With shame being increasingly established as a potential transdiagnostic risk factor (e.g. a factor common across diagnoses) across psychological diagnoses, partially reflected in the varying diagnoses captured within this review, these findings highlight the need for shame to be directly targeted through psychological interventions. A range of psychological interventions have presented as having varying impacts on shame reduction, but it has been fairly consistent that psychological interventions result in a reduction in shame with effect sizes varying from small to large. A number of studies found greater reductions in shame at follow up rather than immediately following treatment and some did not evaluate shame at a follow-up point. Due to the nature of shame, it can be an unacknowledged affect and therefore a participant's personal experiences may not be labelled as shame even though this is what they are in fact experiencing (Lewis, 1971). It is, therefore, possible that shame scores could increase immediately following treatment as the participants' ability to recognise shame and acknowledge it may have increased. Increased scores immediately following treatment may therefore not always be a negative. Follow up outcome measures are particularly important when evaluating interventions to reduce shame as they indicate whether a reduction in shame following initial increased awareness and acknowledgement occurs and/or is maintained. These findings should be taken with some caution, with the overall quality of the review being assessed as moderate. Although there are some strengths within this review, we can only be moderately confident in the effect estimate. It is likely close to the true effect, but it is also possible that it could be substantially different from the current findings. It is, however, the first systematic review to investigate the impact of psychological treatments on reducing shame, has moderately reliable findings and therefore adds to our understanding of treatments that reduce shame.

Although the findings of this review cannot be considered to represent with absolute confidence that the effect estimate reflects the true effect, overall, it does present as moderately accurate. Significant efforts were made to reduce publication bias by exploring a number of research databases and grey literature. Despite this, only a small number of studies were identified through grey literature. Although treatment to reduce shame has only recently gained an increased level of attention, and therefore a large number of studies would not be expected, it is possible that some studies (e.g. unpublished) may have been missed. The findings across the studies are in the main fairly consistent with psychological interventions reducing shame. Combining the studies, a reasonably high sample size was established, however, given the range of psychological interventions the review would have benefited from greater samples within each study in order to represent each type of psychological intervention. Similarly, the review included shame measures that varied in terms of their main focus (e.g. affect, cognition) and overall quality. Overall the risk of bias across the studies was considered to be at a moderate level.

There is only a limited number of studies that have used RCT methodologies to evaluate the impact of psychological interventions on shame reduction and a number of these have considered shame as a secondary outcome measure rather than a primary measure. This suggests that previous research has not fully considered the significance of shame or interventions to reduce it. The studies also had relatively small sample sizes, limiting the generalisability of the findings and a number of the studies also had significant levels of attrition. Given the ethical and practical issues around using RCTs with individuals accessing psychological treatments only a limited number of studies had a pure intervention versus control group or waitlist comparator. The non-standard approach to RCTs has created some difficulties with regards to being able to compare psychological interventions directly against pure comparators such as waitlist controls. However, when psychological interventions are combined, and pure controls are combined, there are distinct differences noted in terms of the impact on shame, despite not being able to make direct comparisons.

This systematic review has implications for clinical practice, policy and future research. This review provides evidence to support the notion that psychological interventions can have an impact in reducing shame. Although not a clear comparator this review also indicates that shame does not reduce without intervention and within some situations shame can actually increase. Given past research has linked shame to a range of physical and mental health conditions as well as harm inflicted on the self and others (e.g. Bryan, et al., 2013: Cavalera, et al., 2016; Chakhssi, et al., 2013; Dutra, et al., 2008; Gold, et al., 2011; Kim, et al., 2011; Stuewig, et al., 2015; Wilson, et al., 2017) the findings of this review have far-reaching implications. Clinicians working with a range of diagnoses, such as those reflected within this review, would benefit from using psychological interventions to reduce shame. Those that are designing such psychological interventions may benefit from introducing elements designed to reduce shame and policymakers would benefit from incorporating such interventions, for example, within therapeutically informed environments. As there is increased focus on trying to identify transdiagnostic factors, that can be targeted within treatment e.g. establishing common factors across disorders (McEvoy, Nathan & Norton, 2009), it is possible that shame could be considered one such factor increasing the need to establish effective interventions. Finally, this review highlights the need for further research into the various psychological interventions to reduce shame.

Promising findings have presented across a range of therapeutic approaches. However, more research would be needed to confidently identify if any particular approach should be favoured over others. It is however recognised that the common elements that presented across interventions are likely important. These include an acknowledgement and validation of the distress the individual experiences and a level of shame exposure in the presence of a supportive other (e.g. therapist). There is also support for considering shame as an important area to address across diagnoses and therefore there may be value in developing a transdiagnostic shame intervention or a module that can be bolted on to interventions designed to address other diagnoses. Future research into these interventions would need to be designed in a high quality and robust manner, with larger samples, across populations and with shame as a primary outcome measure. Alongside this, it would be important to use psychometrically sound measures that reflect a

contemporary understanding of shame and recognise its complexity. Having a greater number of robust studies for each type of psychological intervention may also help as it would provide comparative data in which could indicate which specific interventions are the most effective. As the focus on shame and its treatment continues to develop it would be beneficial to update this review.

CHAPTER FOUR:

INDIVIDUAL LEARNING PLAN (ILP)

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CHAPTER FIVE:

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CHAPTER SIX:

APPENDICES

Research Information Sheet

Research project: Do childhood experiences, shame and self-compassion, link to future harm to self and others?

My name is Kerri Garbutt. I am a Psychologist conducting research with Nottingham Trent University. The research I am asking you to take part in asks about any difficulties you had as a child, how you feel about yourself and treat yourself, and the problems you may have had as you grew up. This research is designed to help us understand some possible ways that we could help those people that have had difficult childhoods and reduce the likelihood that they may harm themselves or others when they get older. In order to share the findings from this research the results will be published. However, no individual will be able to be identified and you will always remain anonymous.

This research is completely voluntary and it will take about 20 minutes to complete. Your information is also anonymous and you cannot be identified from the information you provide. Therefore, once you submit your questionnaire it cannot be withdrawn as it will not be possible to identify which is your questionnaire. Your information will be kept safe and secure.

It is important for me to tell you that some of the questions in this survey could be upsetting. For example, some questions ask about bad experiences you had as a child as well as things that you have done that you may be ashamed of. If you think completing the survey will result in you harming yourself or others please do not fill it in. I will be very grateful to get your completed questionnaire but your safety and the safety of others is more important than this research. If you feel upset when completing this questionnaire please take a break and access support from others. A list of contacts are given at the bottom of this page and will be provided again at the end of the questionnaire.

If you have any questions or concerns about the research please feel free to contact the primary researcher at Kerri.Garbutt2016@my.ntu.ac.uk or project supervisors, Mike Rennoldson (Mike.Rennoldson@ntu.ac.uk) and Mick Gregson (Mick.Gregson@ntu.ac.uk). If you are happy to take part then please complete the survey. If you are unable to contact the primary researcher or have any complaints please contact the project supervisors

Your participation is greatly appreciated.

Thank you,

Kerri Garbutt, Chartered and Registered Psychologist, Nottingham Trent University.

SUPPORT AVAILABLE

Your GP can offer support and referrals. In addition are a number of confidential services to support or provide further guidance.

- Samaritans helpline: 116 123, www.samaritans.org.uk
- Mind – 0300 123 3393 or text 86463
- The National Association for People Abused in Childhood (NAPAC). 0808 801 0331, www.napac.org.uk
- RASAC (Rape and Sexual Abuse Support Centre): www.rasasc.org.uk. 0808 802 9999
- Survivors UK – Male Rape & Sexual Abuse: www.survivorsuk.org
- The following website also gives contact details of a local support: http://thesurvivorstrust.org/find-support/

To consent to this research please tick to confirm the following:

1.	I am 18 years of age or older.	
2.	I have read and understood what this research is about. I know I can not be identified and therefore my participation will be anonymous.	
3.	I agree to participate in the project and know this is voluntary.	
4.	I know that the research asks questions about sensitive areas and agree to take steps to look after myself. I know the researcher thinks the safety of myself and others is more important than the research.	
5.	I understand I can withdraw my participation at any point before I submit my completed questionnaire (due to it being anonymised). The researcher will keep my data safe and secure.	
6.	I understand that anonymised data will be retained and the results of the research will be published. I know that nothing within it will allow anyone to identify me.	

Do childhood experiences, shame and self-compassion, link to future harm to self and others?

Thank you for taking part in this research. Your input has great value. Please ensure you take care of yourself and seek support if needed. A number of support sources available beyond your current support network (e.g. family, friends, etc.) and are recorded below.

SUPPORT AVAILABLE: Your GP can offer support and referrals. In addition are a number of confidential services to support or provide further guidance.

- Samaritans helpline: 116 123, www.samaritans.org.uk
- Mind – 0300 123 3393 or text 86463
- The National Association for People Abused in Childhood (NAPAC). 0808 801 0331, www.napac.org.uk
- RASAC (Rape and Sexual Abuse Support Centre): www.rasasc.org.uk. 0808 802 9999
- Survivors UK – Male Rape & Sexual Abuse: www.survivorsuk.org
- The following website also gives contact details of a local support: http://thesurvivorstrust.org/find-support/

As advised in the information sheet and consent form, the research was interested in looking at the relationship between childhood adversity and later harm to yourself and others. It also explored whether shame and self-compassion influence the relationship between difficulties in childhood and later harm. This research may provide helpful information as to why some people who experiences adversity in childhood grow up to offend and/or self harm. It also explores whether interventions focused on reducing shame and increasing self-compassion help to prevent individuals that experienced adversity from hurting themselves or others as adults.

Your participation was anonymous and the researcher does not hold any identifying information linked to the answers you shared in your questionnaire. Your information will be kept safe within a secure electronic database. The anonymized data will be retained and the results of the research will be published.

Kerri Garbutt, Chartered and Registered Forensic Psychologist and Researcher. Nottingham Trent University.

Research Information Sheet

***Research project:* Do childhood experiences, shame and self-compassion, link to future harm to self and others?**

My name is Kerri Garbutt. I am a Psychologist conducting research with Nottingham Trent University. The research I am asking you to take part in asks about any difficulties you had as a child, how you feel about yourself and treat yourself, and the problems you may have had as you grew up.

I am asking people who are in prison as lots of people who have committed crimes have also had difficult and upsetting childhoods. This research is designed to help us understand what we can do to make sure those people that had difficult childhoods don't hurt themselves or other people when they get older. The questionnaires take about 20 minutes to complete.

Will you tell others what I personally put in the questionnaire? No. Your name, number, and wing, will be on the consent form so that I know where to send the questionnaire. Others may be aware that you have agreed to have a questionnaire sent to you. However, the questionnaire I send will be blank and you do not put your name on it. This way the completed questionnaire that you send back is anonymous and no one will know who the questionnaires belong to. All the answers in your questionnaire (the scores) will be put in a database with all the other scores from other completed questionnaires. No one would be told what you personally put in the questionnaire.

I will keep the consent forms and questionnaires in a locked and secure location. The database where your scores from the questionnaires are stored will be secured and password protected.

Any reasons I shouldn't complete it? It is important for me to tell you that some of the questions may make you feel upset. For example, some questions ask about bad

experiences you had as a child as well as things that you have done that you may be ashamed of.

If you think completing the questionnaire will result in you harming yourself or others please do not fill it in. This may mean you never complete the research or that you choose a time when you feel more able to deal with these questions. I will be very grateful to get your completed questionnaire but your safety and the safety of others is more important than this research.

What will happen to the results of the research? The results of this research will be shared, as the more people who see it the more changes it can influence in future. A summary of the research will be shared with HM Prison and Probation Services. The research will also be published.

If I want to participate what do I do next? If you want to take part please complete the attached consent form with your name, number and wing and send it to the location written on the consent form. I will then send you a questionnaire for you to complete and return to me. When you send back the questionnaire please close the envelope. I will be the only person who opens it. Please keep the information sheet for your records.

You do not have to take part in this research and you can change your mind at any time up to when you send in the questionnaire. When I get your questionnaire I will not know which one is yours and therefore which one to destroy.

How can I contact you if I have questions? I have a point of contact within each prison who can forward any questions you may have to me (noted below). Alternatively, I will also attend the prison at specific times to answer any questions you may have about taking part in this research.

What can I do if I feel upset whilst completing the questionnaires?
No one will know that you are completing this questionnaire. Therefore, it is important that you take care of yourself. Stop filling in the questionnaire if you feel upset and at risk of hurting yourself or others. Please ask for help and support if you feel this way. Support can be gained from:

- Other prisoners and friends on the wing

- Staff on your wing, work place and the chapel

- Friends and family who you feel support you.

- Prison support systems such as Listeners, Insiders Samaritans etc.

If this research has leaves you thinking that you want to contact the police to discuss what you experienced as a child please let staff know and send an application to the Police Liaison Officer. They can advise you of what steps are involved in this process. Additionally, solicitors who specialise in this area can help. Contact details of a number are available within the Inside Time.

It is expected that **I will be attending the prison in August 2017** to deliver questionnaires to those who have returned their consent forms and to answer any questions you need answering before you feel able to consent to the research. It is hoped that I will spend some time on each wing and you will have some notice before I attend the prison.

You can also put in an application with questions to Kerri Garbutt (Researcher), Psychology Department.

PLEASE KEEP THIS INFORMATION SHEET AND SEND BACK THE CONSENT PAGE ONLY.

Please attach the address label provided (e.g. *Kerri Garbutt, Researcher, Psychology Department*) **to this envelope and send your completed consent form within it. I will deliver a questionnaire to you when I attend the prison in a couple of weeks' time.**

Consent form

If you are happy to take part in this research please sign and date this form and send it to the location above. Your name is only taken at this point so that I know who and where to send your questionnaire to. Your questionnaire does not ask any information that will identify you.

Name:_____

Prison Number: _____

Wing:_____

I, the undersigned, confirm that:

1.	I have read and understood what this research is about. I know it is voluntary and I agree to participate.
2.	I know that the research asks questions about sensitive areas and agree to take steps to look after myself. I know the researcher thinks the safety of myself and others is more important than the research.
3.	I understand I can withdraw my participation at any point before I send in my completed questionnaire (due to it being anonymised). I do not have to give reasons and will not be penalised for withdrawing.
4.	I understand that I only give my name on the consent form so that a blank questionnaire can be sent to me. My questionnaire will not have my name and therefore will be anonymous. The researcher will keep my data safe and secure.
5.	I understand that anonymised data will be retained and the results of the research will be published. I know that nothing within it will allow anyone to identify me. Documentation that contains identifying information (e.g. the consent forms) will be destroyed at the end of the research project.

Participant Signature:

Date:

Please return the completed consent form as soon as possible.

Experience of shame questions

Instructions: Below is a list of statements describing situations you may experience from time to time. Following each situation are four statements describing possible reactions to the situation. Read each statement carefully and circle the number to the right of the item that indicates how often you find yourself reacting in that way. **Please respond to all four items for each situation and circle the relevant number.**

A. When an activity makes me feel like my strength or skill is inferior (e.g. not as good as others)**:**					
1. I don't let it bother me.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
. I get angry at myself for not being good enough.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
3. I withdraw from the activity.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
4. I get irritated with other people.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
B. In competitive situations where I compare myself with others:					
5. I criticize myself.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
6. I try not to be noticed.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
7. I feel ill will toward the others.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
8. I ignore my mistakes.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
C. In situations where I feel insecure or doubt myself:					
9. I shrink away from others.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
10. I blame other people for the situation.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
11. I act more confident than I am.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
12. I feel irritated with myself.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
D. At times when I am unhappy with how I look:					
13. I take it out on other people.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
14. I pretend I don't care.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

15. I feel annoyed at myself.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
16. I keep away from other people.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

E. When I make an embarrassing mistake in public:

17. I hide my embarrassment with a joke.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
18. I blame myself for not being more careful.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
19. I wish I could avoid being noticed.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
20. I get mad at whoever embarrassed me.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

F. When I feel lonely or left out:

21. I put myself down.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
22. I pull away from others.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
23. I blame other people for excluding me.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
24. I don't let it show.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

G. When I feel others think poorly of me:

25. I feel like being by myself.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
26. I want to point out their faults.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
27. I deny there is any reason for me to feel bad.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
28. I am aggravated by my mistakes.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

H. When I think I have disappointed other people:

29. I get mad at them for expecting so much.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
30. I cover my feelings with a joke.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
31. I beat myself up/put myself down.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
32. I remove myself from the situation.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

I. When I feel rejected by someone:

33. I soothe myself with distractions.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

34. I repeatedly think about my imperfections.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
35. I withdraw from the situation.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
36. I get angry with them.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
J. When other people point out my faults:					
37. I get frustrated with myself for having them.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
38. I feel like I'm shrinking.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
39. I point out their faults.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
40. I try not to feel bad.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
K. When I feel humiliated:					
41. I isolate myself from other people.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
I get mad at people for making me feel this way.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
43. I cover up the humiliation by keeping busy.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
44. I get angry with myself.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
L. When I feel guilty:					
45. I push the feeling back on those who make me feel this way.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
46. I disown the feeling.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
47. I feel unworthy of being around other people.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS
48. I want to be alone.	**0** NEVER	**1** SELDOM	**2** SOMETIMES	**3** OFTEN	**4** ALMOST ALWAYS

Measure of childhood adversity

Instructions: The following questions explore the diference experiences you may have had as a child. **Each section has it's own instructions but all responses are yes or no and focus on the first 18 years of your life. Please circle yes or no for each item.**

	Sometimes parents, stepparents or other adults living in the house/care home/boarding school do hurtful things. If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'		
1.	Swore at you, called you names, said insulting things like your "fat", "ugly", "stupid", etc. more than a few times a year.	**Yes**	**No**
2.	Said hurtful things that made you feel bad, embarrassed or humiliated more than a few times a year.	**Yes**	**No**
3.	Acted in a way that made you afraid that you might be physically hurt.	**Yes**	**No**
4.	Threatened to leave or abandon you.	**Yes**	**No**
5.	Locked you in a closet, attic, basement or garage.	**Yes**	**No**
6.	Intentionally pushed, grabbed, shoved, slapped, pinched, punched or kicked you.	**Yes**	**No**
7.	Hit you so hard that it left marks for more than a few minutes.	**Yes**	**No**
8.	Hit you so hard, or intentionally harmed you in some way, that you received or should have received medical attention.	**Yes**	**No**
9.	Smacked you on your buttocks, arms or legs.	**Yes**	**No**
10.	Smacked you on your bare (unclothed) buttocks.	**Yes**	**No**
11.	Smacked you with an object such as a strap, belt, brush, paddle, rod, etc.	**Yes**	**No**
12.	Made inappropriate sexual comments or suggestions to you.	**Yes**	**No**
13.	Touched or fondled your body in a sexual way.	**Yes**	**No**
14.	Had you touch their body in a sexual way.	**Yes**	**No**
	Sometimes parents, stepparents or other adults living in the house/care home/boarding school do hurtful things to your <u>siblings</u> (brother, sister, stepsiblings, other children you shared care homes/boarding schools with). If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'		
15.	Hit your sibling (stepsibling) so hard that it left marks for more than a few minutes.	**Yes**	**No**
16.	Hit your sibling (stepsibling) so hard, or intentionally harmed him/her in some way, that he/she received or should have received medical attention.	**Yes**	**No**

17.	Made inappropriate sexual comments or suggestions to your sibling (stepsibling).	**Yes**	**No**
18.	Touched or fondled your sibling (stepsibling) in a sexual way.	**Yes**	**No**

Sometimes adults or older individuals NOT living in the house do hurtful things to you. If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'

19.	Had you touch their body in a sexual way.	**Yes**	**No**
20.	Actually had sexual intercourse (oral, anal or vaginal) with you.	**Yes**	**No**

Sometimes intense arguments or physical fights occur between parents, stepparents or other adults living in the household. If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'

21.	Saw adults living in the household push, grab, slap or throw something at your mother (stepmother, grandmother).	**Yes**	**No**
22.	Saw adults living in the household hit your mother (stepmother, grandmother) so hard that it left marks for more than a few minutes.	**Yes**	**No**
23.	Saw adults living in the household hit your mother (stepmother, grandmother) so hard, or intentionally harm her in some way, that she received or should have received medical attention.	**Yes**	**No**
24.	Saw adults living in the household push, grab, slap or throw something at your father (stepfather, grandfather).	**Yes**	**No**
25.	Saw adults living in the household hit your father (stepfather, grandfather) so hard that it left marks for more than a few minutes.	**Yes**	**No**

Sometimes children your own age or older do hurtful things like bully or harass you. If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'

26.	Swore at you, called you names, said insulting things like your "fat", "ugly", "stupid", etc. more than a few times a year.	**Yes**	**No**
27.	Said hurtful things that made you feel bad, embarrassed or humiliated more than a few times a year.	**Yes**	**No**
28.	Said things behind your back, posted derogatory messages about you, or spread rumors about you.	**Yes**	**No**
29.	Intentionally excluded you from activities or groups.	**Yes**	**No**

30.	Acted in a way that made you afraid that you might be physically hurt.	**Yes**	**No**
31.	Threatened you in order to take your money or possessions.	**Yes**	**No**
32.	Forced or threatened you to do things that you did not want to do.	**Yes**	**No**
33.	Intentionally pushed, grabbed, shoved, slapped, pinched, punched, or kicked you.	**Yes**	**No**
33.	Hit you so hard that it left marks for more than a few minutes.	**Yes**	**No**
35.	Hit you so hard, or intentionally harmed you in some way, that you received or should have received medical attention.	**Yes**	**No**
36.	Forced you to engage in sexual activity against your will.	**Yes**	**No**
37.	Forced you to do things sexually that you did not want to do.	**Yes**	**No**

Please indicate if the following happened during your childhood (first 18 years of your life). If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'

38.	You felt that your mother or other important maternal figure was present in the household but emotionally unavailable to you for a variety of reasons like drugs, alcohol, workaholic, having an affair, heedlessly pursuing their own goals.	**Yes**	**No**
39.	You felt that your father or other important paternal figure was present in the household but emotionally unavailable to you for a variety of reasons like drugs, alcohol, workaholic, having an affair, heedlessly pursuing their own goals.	**Yes**	**No**
40.	A parent or other important parental figure was very difficult to please.	**Yes**	**No**
41.	A parent or other important parental figure did not have the time or interest to talk to you.	**Yes**	**No**
42.	One or more individuals in your family made you feel loved.	**Yes**	**No**
43.	One or more individuals in your family helped you feel important or special.	**Yes**	**No**
44.	One or more individuals in your family were there to take care of you and protect you.	**Yes**	**No**
45.	One or more individuals in your family were there to take you to the doctor or Emergency Room if the need ever arose, or would have if needed.	**Yes**	**No**

Please indicate if the following statements were true about you and your family during your childhood. If this happened during your childhood (first 18 years of your life), please circle 'Yes'. If this did not happen in your childhood, please circle 'No.'		
46. You didn't have enough to eat.	**Yes**	**No**
47. You had to wear dirty clothes.	**Yes**	**No**
48. You felt that you had to shoulder adult responsibilities.	**Yes**	**No**
49. You felt that your family was under severe financial pressure.	**Yes**	**No**
50. One or more individuals kept important secrets or facts from you.	**Yes**	**No**
51. People in your family looked out for each other.	**Yes**	**No**
52. Your family was a source of strength and support.	**Yes**	**No**

Harm to self

Instructions: We are all capable of behaving in ways that can be self destructive. Below are examples of a range of ways in which we can intentionally cause some level of harm to ourselves. This questionnaire is interested which types of behaviours you have engaged in. **Please answer as honestly as you can. Please answer the following questions by ticking either yes or no. Tick yes only to those that you have done intentionally, or on purpose, to hurt yourself.**

	YES	NO
Have you ever intentionally or on purpose:		
1. Overdosed?		
2. Cut yourself on purpose?		
3. Burned yourself on purpose?		
4. Hit yourself?		
5. Banged your head on purpose?		
6. Abused alcohol?		
7. Driven recklessly on purpose?		
8. Scratched yourself on purpose?		
9. Prevented wounds from healing?		
10. Made medical situations worse, on purpose (e.g. skipped medication)?		
11. Been promiscuous (i.e., had many sexual partners)?		

12.	Set yourself up in a relationship to be rejected?		
13.	Abused prescription medication?		
14.	Distanced yourself from god as a punishment?		
15.	Engaged in emotionally abusive relationships?		
16.	Engaged in sexually abusive relationships?		
17.	Lost a job on purpose?		
18.	Attempted suicide?		
19.	Exercised an injury on purpose?		
20.	Tortured yourself with self-defeating thoughts?		
21.	Starved yourself to hurt yourself?		
22.	Abused laxatives to hurt yourself?		

Harm toward other's questions

Instructions: We all get upset, frustrated and angry sometimes and have behaved in ways that can be unpleasant for others. This can be directed at strangers, work colleagues, family members, friends and our partners. This questionnaire is interested in exploring what types of acts you have done as an adult and how often you tend to act this way. Please consider how often you have behaved this way across your whole adult life and answer as honestly as you can.

Looking back across your life how often have you tended to behave in the following ways:

	0 NEVER	1 RARELY	2 ON OCCASION	3 OFTEN	4 VERY OFTEN
Used my relationship with someone to try and get them to change their decision	0	1	2	3	4
Used sarcasm to insult someone	0	1	2	3	4
Tried to influence someone by making them feel guilty	0	1	2	3	4
Withheld information from someone that the rest of the group is let in on	0	1	2	3	4
Purposefully left someone out of activities	0	1	2	3	4
Made other people not talk to someone	0	1	2	3	4
Excluded someone from a group	0	1	2	3	4
Used someone's feelings to coerce them	0	1	2	3	4
Made negative comments about someone's physical appearance	0	1	2	3	4
Used private in-jokes to exclude someone	0	1	2	3	4

	0 NEVER	1 RARELY	2 ON OCCASION	3 OFTEN	4 VERY OFTEN
. Used emotional blackmail on someone	0	1	2	3	4
. Imitated someone in front of others	0	1	2	3	4
. Spread rumours about someone	0	1	2	3	4
. Played a nasty practical joke on someone	0	1	2	3	4
. Done something to try and make someone look stupid	0	1	2	3	4
. Pretended to be hurt and/or angry with someone to make them feel bad about him/her-self	0	1	2	3	4
. Made someone feel that they don't fit in	0	1	2	3	4
. Intentionally embarrassed someone around others	0	1	2	3	4
. Stopped talking to someone	0	1	2	3	4
. Put undue pressure on someone	0	1	2	3	4
. Omitted someone from conversations on purpose	0	1	2	3	4
. Made fun of someone in public	0	1	2	3	4
. Called someone names	0	1	2	3	4
. Criticised someone in public	0	1	2	3	4
. Turned other people against someone	0	1	2	3	4
. Shaken a finger at someone	0	1	2	3	4
. Made threatening gestures or faces	0	1	2	3	4
. Shaken a fist at someone	0	1	2	3	4
. Acted like a bully	0	1	2	3	4
30. Grabbed someone suddenly or forcefully	0	1	2	3	4
31. Hit or kicked a wall, door or furniture	0	1	2	3	4
. Threatened to harm/damage things you know someone cares about	0	1	2	3	4
. Destroyed something belonging to a person intentionally	0	1	2	3	4
. Thrown, smashed or broken an object	0	1	2	3	4

	0	1	2	3	4
. Threatened to destroy property	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Driven dangerously with someone in the car to frighten them	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Thrown an object at someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened to hurt someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened suicide to influence someone's behaviour	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened to hurt an individual you know the person cares about	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened to kill someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Acted like you wanted to kill someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened someone with a club-like object	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened someone with a weapon	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Threatened someone with a knife or gun	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Held someone down, pinning them in place	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Push or shoved someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Shaken or roughly handled someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Smacked someone to punish them	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Physically twisted someone's arm	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Pulled someone's hair	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Scratched someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Bitten someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Kicked someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Slapped someone with the palm of a hand	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Slapped someone with back of a hand	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Punched someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
. Slapped someone repeatedly around the face and head	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN

.	Hit someone with an object	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Stomped on someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Choked someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Beat someone up	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Burned someone with something	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Used a club-like object on someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN
.	Used a knife or gun on someone	**0** NEVER	**1** RARELY	**2** ON OCCASION	**3** OFTEN	**4** VERY OFTEN

Sexual Strategies Scale.

Instructions: In the past, which if any of the following strategies have you used to convince someone to have sex (oral, anal, or vaginal intercourse) after they initially said "no" or did not seem to be interested in sex? (tick all that apply)

	YES	NO
1. Continuing to touch and kiss them in the hope that they will give in to sex.		
2. Telling them lies (e.g., saying "I love you" when you don't).		
3. Using your older age to convince them.		
4. Getting them drunk or high in order to convince them to have sex.		
5. Threatening to tell others a secret or lie about them if they don't have sex.		
6. Asking them repeatedly to have sex.		
7. Blocking them if they try to leave the room.		
8. Threatening to harm them physically if they don't have sex.		
9. Taking advantage of the fact that they are drunk or high.		
10. Threatening to harm yourself if they don't have sex.		
11. Using a weapon to frighten them into having sex.		
12. Taking off their clothes in the hopes that they will give in to sex.		
13. Taking off your clothes in the hopes that they will give in to sex.		
14. Using physical restraint.		
15. Threatening to break up with them if they don't have sex.		
16. Questioning their sexuality (e.g., calling them gay, lesbian, frigid).		
17. Using your authority to convince them (e.g., if you were their boss, supervisor, teacher, in a position of power over them etc.).		
18. Harming them physically.		

19. Tying them up.		
20. Questioning their commitment to the relationship (e.g., saying "if you loved me, you would").		
21. Accusing them of "leading you on" or being "a tease."		
22. Slipping them drugs (e.g., GHB or "Roofies") so that you can take advantage of them.		

Instructions: Please answer the following as accurately as you can:

1. Have you ever been convicted of an offence?	YES	NO
2. Have you ever been convicted of a violent offence? *(e.g. cruelty, false imprisonment, harassment, kidnapping, Assault, ABH, GBH, making threats to kill, aggravated burglary, robbery, manslaughter, attempted murder, murder etc)*	YES	NO
3. Have you ever been convicted of a weapons related offence? *(e.g. possession of a firearm with intent to endanger life, use of firearms to resist arrest, assault with a weapon with intent, wounding, armed robbery, etc)*	YES	NO
4. Have you ever been convicted of an arson offence?	YES	NO
5. Have you ever been convicted of a non-contact sexual offence? *(e.g. indecent exposure, grooming, possession / downloading / making indecent images of children, voyeurism, etc)*	YES	NO
6. Have you ever been convicted of a contact sexual offence? *(e.g. sexual/indecent assault, rape, buggery, attempted rape, engaging in sexual activity with a child, assault by penetration, inciting a child into sexual activity etc)*	YES	NO

Self Compassion measure

Instructions: This measure explored how you typically act towards yourself in difficult times. Please read each statement carefully before answering. **Please indicate how often you behave in the stated manner by circling the relevant number.**

> Overall how often do you treat yourself with kindness, understanding and help yourself through difficult times?
>
> | **1** | **2** | **3** | **4** | **5** |
> |---|---|---|---|---|
> | ALMOST NEVER | | | | ALMOST ALWAYS |

When things are going badly for me, I see the difficulties as part of life that everyone goes through.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

I try to be loving towards myself when I'm feeling emotional pain.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

When something upsets me I try to keep my emotions in balance.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

When I'm going through a very hard time, I give myself the caring and tenderness I need.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

When something painful happens I try to take a balanced view of the situation.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

I try to see my failings as part of the human condition (e.g. failure is part of being human).

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

).   When I fail at something important to me I try to keep things in perspective.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

11.   When I'm feeling down I try to approach my feelings with curiosity and openness (e.g. I try to figure out why I'm feeling down and acknowledge it).

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

.   I'm kind to myself when I'm experiencing suffering (e.g. painful emotions)

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

.   I'm tolerant of my own flaws and inadequacies (e.g. I accept I'm not perfect).

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

.   I try to be understanding and patient towards those parts of my personality I don't like.

1	**2**	**3**	**4**	**5**
ALMOST NEVER				ALMOST ALWAYS

Demographic questions

1. What is your gender?   Male   Female   Other

2. What is your current age?   _____

3. What is your ethnicity:

White: British/Irish		Hispanic or Latino		Black other	
Black: British/Irish		Black African		Asian other	
Asian: British/Irish		Black Caribbean		White other	
Other (please specify)					

4. What is your marital status:

Single, never married		Widowed		Separated	
Married or civil partnership		Divorced			

5. What is your religion?

No religion		Catholic		Buddhist	
Christian		Sikh		Muslim	
Church of England		Jewish		Hindu	
Something else (please specify)					

6. Do you have a good understanding of English?   YES   NO

7.   Have you had any individual or group therapy/counselling sessions to help you manage distressing feelings (e.g. reducing shame, distressing past memories)?
YES*   **NO**

* If yes please state what type of therapy (e.g. CBT, EMDR, compassion-focussed, Acceptance and Commitment, Dialectal Behaviour, psychodynamic, trauma-focussed etc):

_____

Thank you for taking the time to part in this research. Your questionnaire will add great value.

Please now return this completed questionnaire in the addressed envelope provided and seal the envelope.

Do childhood experiences, shame and self-compassion, link to future self harm and harm committed against others?

Thank you for taking part in this research. Your input has great value. Please ensure you take care of yourself and seek support if needed. Support can be gained from:

- Other prisoners and friends on the wing

- Staff on your wing, work place and the chapel

- Friends and family who you feel support you.

- Prison support systems such as Listeners, Samaritans etc.

If this research has left you thinking that you want to contact the police to discuss what you experienced as a child please let staff know and send an application to the Police Liaison Officer. They can advise you of what steps are involved in this process. Additionally, solicitors who specialise in this area can help. Contact details of a number of solicitors are available within the Inside Time.

As advised in the information sheet and consent form the research was interested in looking at the relationship between childhood adversity and later harm to yourself and others. It also explored whether shame and self-compassion influence the relationship between childhood adversity and later harm. This research may provide helpful information as to why some people who experience adversity in childhood grow up to offend and/or self harm. It also explores whether interventions focused on reducing shame and increasing self-compassion help to prevent individuals that experienced adversity from hurting themselves or others as adults.

Your information will be kept safe and secure. As advised previously the questionnaire did not ask you for any identifying information and therefore is anonymous. When I receive your completed questionnaire, I will input the information into a secure electronic database. The consent forms will be destroyed when the research project is completed. The anonymized data will be retained and the results of the research will be published in a journal and shared with HMPPS.

Kerri Garbutt, Chartered and Registered Forensic Psychologist and Researcher. Nottingham Trent University

Database & number Year published:	
Title & Author:	
Intervention & comparator	
Measure of shame (primary/secondary)	
Research method (e.g. RCT, wait list etc)	
Findings Pre - post – FU data (SD, M, N)	
Other info	

Author (date):	Outcome measure and when taken: Intervention/comparators (sample each grp): Sample description (where recruited/characteristics/sample size):	
Domain	**Review authors' judgement**	**Notes on rating**
Random sequence generation *(i.e. no selection bias)*	High risk Moderate risk Low risk Unclear	*Was random sequence generation used?* *Did the randomisation work? For, example, there was no significant differences between the groups at baseline (p value indicates probability any differences are by chance and not poor random allocation)* *N.B If there was is the sample size large enough to make this negligible, or were alternative procedures used to ensure balanced groups (e.g. blocking/ random allocation rule/ replacement randomisation)?*
Allocation concealment *(i.e. no selection bias)*	High risk Moderate risk Low risk Unclear	*Was allocation concealment used (e.g. which intervention the participant has been allocated to is unknown to the person enrolling them into the study)?*
Blinding of participants and personnel	High risk Moderate risk	*Did the study attempt to blind the participants and/or personnel so that they did not know who received the intervention (single/double blind) and were methods effective?*

at allocation (i.e. no performance bias)	Low risk Unclear	
Blinding of outcome assessment (i.e. no detection bias)	High risk Moderate risk Low risk Unclear	*Did the study blind personnel and participants when assessing outcomes at post and follow up stages?* *If participants not blinded, were there any additional incentives for them to present as being successfully or unsuccessfully treated?* *An objective valid and reliable outcome measure used?*
Incomplete outcome data (i.e. no potential attrition bias)	High risk Moderate risk Low risk Unclear	*Were more than (80%)[a] of participants enrolled in trials included in the analysis?* *Were reasons for drop outs provided?* *Did they analyze data on an Intention to Treat basis?*
Selective reporting (i.e. no reporting bias)	High risk Moderate risk Low risk Unclear	*Were data reported consistently for the outcome of interest (i.e. no potential selective reporting)?*
Other sources of bias	High risk Moderate risk - Low risk Unclear	*Treatment integrity:* *Treatment fidelity checks undertaken?* *Was the level of exposure/dosage measured and described (e.g. number of sessions etc)?* *Facilitators of intervention appropriately experienced?* *Participants unintentionally exposed to other interventions?* *Did the trials end as scheduled (i.e. not stopped early)?*
	High risk Moderate risk Low risk Unclear	*Impact of findings* *Sample size adequate?* .

Domain	Review authors' judgement	Notes on rating
Overall Risk of Bias	*High risk* *Moderate risk* *Low risk* *Unclear*	*On average what is the risk of bias across studies, can we rely on the overall findings from the evidence?*
Inconsistency	*High risk* *Moderate risk* *Low risk* *Unclear*	2. Point estimates did not vary widely? (i.e. no clinical meaningful inconsistency) 3. To what extent do confidence intervals overlap? Substantial overlap: (all confidence intervals overlap at least one of the included studies point estimate) Some overlap : (confidence intervals overlap but not all overlap at least one point estimate) No overlap: (At least one outlier: where the confidence interval of some of the studies do not overlap with those of most included studies) 4. Was the direction of effect consistent? 5. What was the magnitude of statistical heterogeneity (as measured by I^2)? Low (e.g. $I^2 <40\%$) Moderate (e.g. I^2 40-60%) High (e.g. $I^2 >60\%$) 6. Was the test for heterogeneity statistically significant ($p < 0.1$)?
Indirectness	*High risk* *Moderate risk* *Low risk* *Unclear*	7. Were the populations in included studies applicable to the target population? Yes-shame across various samples 8. Were the interventions in included studies applicable to target intervention? Yes. Most delivered or authored by individuals that developed the therapy 9. Was the included outcome not a surrogate outcome? 10. Was the outcome timeframe sufficient? Ideally longer time frames across studies would have been beneficial 11. Were the conclusions based on direct comparisons? Research would have benefitted from direct intervention control comparators rather than one intervention versus another.
Imprecision	*High risk* *Moderate risk* *Low risk* *Unclear*	12. Was the confidence interval for the pooled estimate not consistent with benefit and harm? 13. What was the magnitude of the median sample size? High (e.g. 300 participants) Intermediate (e.g. 100-300 participants) Low (e.g. <100 participants)

		14. What was the magnitude of the number of included studies? Large (e.g. >10 studies) Moderate (e.g. 5-10 studies) Small (e.g. <5 studies) *15.* Was the outcome a common event? (e.g. occurs more than 1/100) ⁻ N/A if not dichotomous
Publication Bias	***High risk*** ***Moderate risk*** ***Low risk*** ***Unclear***	16. Did the authors conduct a comprehensive search? 17. Did the authors search for grey literature? 18. Authors did not apply restrictions to study selection on the basis of language? 19. There was no industry influence on studies included in the review?. 20. There was no evidence of funnel plot asymmetry? 21. There was no discrepancy in findings between published and unpublished trials?
OVERALL QUALITY		<table><tr><th>Symbol</th><th>Quality</th><th>Interpretation</th></tr><tr><td>⊕⊕⊕⊕</td><td>High</td><td>We are very confident that the true effect lies close to that of the estimate of the effect.</td></tr><tr><td>⊕⊕⊕◯</td><td>Moderate</td><td>We are moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.</td></tr><tr><td>⊕⊕◯◯</td><td>Low</td><td>Our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.</td></tr><tr><td>⊕◯◯◯</td><td>Very low</td><td>We have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect.</td></tr></table>