UNUSUAL EXPERIENCES, BELIEFS AND PARANOIA: EXPLORING THE RELATIONSHIP WITH SHAME MEMORIES AND COMPASSION

SUZANNAH LECHLER

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ABSTRACT

Background: Individuals with psychotic-type experiences (unusual experiences, beliefs and paranoia) have been found to have high levels of shame. Early shame memories, which can act as traumatic memories and become central to one's identity, have been associated with shame in adulthood. Whilst shame has been examined in relation to paranoia, the relationship between shame and unusual experiences and beliefs warrants further attention. Furthermore, shame memories have not yet been investigated in individuals with unusual beliefs and experiences. Self-compassion has been found to reduce shame, psychotic-type experiences and their associated distress, but is yet to be investigated within this population.

Aims: To explore the relationships between shame memories containing traumatic and centrality features, current experiences of shame, psychotic-type experiences and their associated distress, and self-compassion.

Method: A cross-sectional design was employed and a mixed clinical/non clinical sample of adults from the UK was recruited (N = 35) through convenience and purposive sampling. Participants completed a series of established self-report measures via an online survey platform.

Results: Multiple regression analyses showed that shame memories containing traumatic features were a significant predictor of external shame and the distress associated with all three psychotic-type experiences. Internal shame was found to moderate this relationship.

Conclusion: Several tentative clinical implications can be drawn from the findings including the importance of attending to the properties of shame memories in the experience of distressing psychotic-type experiences. This may be particularly relevant for individuals who also experience external shame. Internal shame should also be considered as a focus for therapeutic interventions when working with distressing psychotic-type experiences.

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LIST OF ABBREVIATIONS

Below is a list of the common abbreviations used within this study. Relevant citations are provided in the main body.

ACEs = Adverse childhood experiences

AM = Autobiographical Memory

AMQ = Autobiographical Memory Questionnaire

BME = Black and Minority Ethnic

CES = Centrality of Event Scale

CES-S = The Centrality of Event Scale-Short Version

CET = Centrality of Event Theory

CFT = Compassion Focused Therapy

CIs= Confidence Intervals

HVN = Hearing Voices Network

IES-R = The Impact of Event Scale-Revised

MANOVA = Multivariate Analysis of Variance

MR = Multiple Regression

MRs = Multiple Regressions

OAS-2 = The Other As Shamer Scale-2

PIS= Participant Information Sheet

PTEs = Psychotic-type Experiences

PTSD = Post-Traumatic Stress Disorder

S-cS = Self-compassion Scale

SCS = The Social Comparison Scale

SD = Standard Deviation

SDs = Standard Deviations

SEI = Shame Experiences Interview

SM = Shame Memory

SMs = Shame Memories

1. INTRODUCTION

1.1. Overview

This chapter begins with a discussion of the terminology related to psychotic-type experiences. Following this, an overview of each of the variables of interest is provided, including definitions, prevalence, the impact they have, and key theories and models. The relationships between the variables are then outlined. Two literature reviews are presented demonstrating how shame, shame memories, psychotic-type experiences and compassion have been investigated to date, presenting a rationale for the study's overall aim and research questions. The chapter will close with an explanation of the study's clinical utility and the research questions to be addressed.

1.2. Terminology

There continues to be considerable debate around the most appropriate and helpful way of referring to psychotic-type experiences (PTEs). The variety of terms used is indicative of the wider argument regarding the nature and causes of these experiences. Historically, experiences such as hearing voices or having paranoid or unusual thoughts have been viewed as symptoms of mental illness, such as psychosis or schizophrenia. Individuals who have such experiences have been referred to as "patients" or "sufferers". Whilst this feels a helpful way of conceptualising these experiences for some, many others do not consider themselves to have an illness and therefore struggle with the use of such terms.

Accordingly, the experiences in question will be referred to as "experiences" as opposed to "symptoms". Non-pathologising terms such as hearing voices, having unusual beliefs, or experiencing paranoia are used, and the combination of these experiences is referred to as "psychotic-type experiences". Occasionally the terms psychosis and schizophrenia are used as they are the terms commonly used within our society and existing literature to describe these experiences. In acknowledgement that not everyone agrees that there is an underlying illness, the phrasing "people diagnosed with" (e.g., psychosis),

instead of “people with psychosis” is used. Similarly, reference is made to people, rather than patients.

1.3. Psychotic-type experiences

Psychosis is a common experience, with an annual incidence of 32 cases per 100,000 people (Kirkbride & Jones, 2011). Though it remains poorly understood, it is characterised by unusual experiences (e.g., hearing voices), unusual beliefs and paranoia. Whilst PTEs can be comforting, inspiring or benign for many (Freeman et al., 2005; Nayani & David, 1996; Peters, Day, McKenna, & Orbach, 1999; Richards, 2008; Romme & Escher, 2000), they can also lead to significant distress, and be linked to a decline in occupational (Fornells-Ambrojo, Craig, & Garety, 2014), and social functioning (Palmier-Claus et al., 2016), social deprivation (Kirkbride, Jones, Ullrich, & Coid, 2014), poverty (Read, 2010), suicide, and self-harm (Mork et al., 2013; Taylor, Hutton, & Wood, 2014).

There has been a paradigm shift in understanding PTEs, in which they are viewed as meaningful and valid rather than symptoms of illness (British Psychological Society [BPS], 2017a). Indeed, many individuals do not seek professional help for PTEs, as they do not cause them distress (Bak et al., 2003; Brett, Peters, & McGuire, 2015; May, 2010). Others manage any distress on their own or with help from their support network (Dillon & Hornstein, 2013; Longden, Corstens, & Dillon, 2013; Romme, Escher, Dillon, Corstens, & Morris, 2009). However, PTEs cause some individuals significant distress, leading them to seek help from mental health services.

Over the past fifteen years a “single symptom” approach has emerged, with an increasing amount of research investigating distinct PTEs such as hearing voices (Bentall, 2003). It has been proposed that PTEs may be mapped onto a continuum as opposed to a categorical definition of psychosis (van Os, Linscott, Myin-Germeys, Delespaul, & Krabbendam, 2009). This conceptualisation developed from findings that people without a diagnosis of psychosis commonly have experiences such as paranoia and hearing voices (Freeman, Pugh, & Garety, 2008; Romme & Escher, 1989). This prompted the growth of the

Service User Movement and organisations such as the Hearing Voices Network (HVN; Sheffield Hearing Voices Network, 2013). The HVN is a network of self-help groups across the United Kingdom (UK) for people with unusual experiences. It is rooted in the notion that different people have different views on the nature and causes of their experiences. As this study is investigating three distinct PTEs, these will now be individually considered.

1.3.1. Unusual experiences

Unusual experiences - what psychiatry terms “hallucinations” - consist of hearing voices when no-one is there, or seeing, tasting, smelling or feeling things that others do not. Unusual experiences such as hearing voices are relatively common, with up to 10% of people hearing a voice when there is no-one there at some point in their life (Johns et al., 2014). Hearing voices can take many forms and occur in a broad range of clinical and non-clinical contexts (Choong, Hunter, & Woodruff, 2007; Johns et al., 2014). It is increasingly recognised that the voices people hear have meaning in relation to their life experiences (Longden, 2017), and voice-hearing is associated with a high level of exposure to adverse events (Varese et al., 2012). It is estimated that hearing voices has a lifetime prevalence of approximately 64 - 80% in people diagnosed with schizophrenia spectrum “disorders” (McCarthy-Jones et al., 2017).

1.3.2. Unusual beliefs

Unusual beliefs - what psychiatry terms “delusions” - can be a significant and distressing experience with the potential to adversely impact on functioning (Harrow et al., 2004) and psychological well-being (Freeman et al., 2014). Within psychiatric contexts, they are defined as highly implausible beliefs that are strongly held and are not changed when faced with contradictory evidence (American Psychiatric Association, 2013). However, it has been argued that such delusions are notably comparable to other beliefs or prejudices. Indeed, many “normal” beliefs encompass a resistance to change and a bias towards evidence that verifies one’s view (Warman & Martin, 2006). In line with the continuum view of PTEs (Pechey & Halligan, 2011), unusual beliefs are more prevalent than psychiatry presumes (e.g., Poulton et al., 2000; van Os, Hannsen, Bijl, & Ravelli, 2000), with 1 - 3% of the “general population” having

been found to have fairly regular “delusional ideation” at clinically significant levels (Freeman, 2006).

1.3.3. Paranoia

Another common psychotic-type experience is paranoia (Sartorius et al., 1986). As with other PTEs, paranoia ranges along a continuum, from social evaluative worries and increased self-referential bias to more pervasive forms, known as “paranoid delusions” within psychiatric contexts (Barreto-Carvalho, Pinto-Gouveia, Peixoto, & Motta, 2014; Barreto-Carvalho et al., 2015; Bebbington et al., 2013; Freeman et al., 2005; Verdoux & van Os, 2002). Consequently, some overlap exists between paranoia and unusual beliefs.

Paranoia is defined as a normative psychological process that is experienced within both clinical and non-clinical populations (Ellet, Lopes, & Chadwick, 2003; Fenigstein & Vanable, 1992). It has been proposed that paranoia is nearly as common as anxiety and depression (Freeman et al., 2005). Indeed, research indicates that approximately one in three people hold at least one belief that may be deemed paranoid: “paranoia is so common as to be almost normal” (Bebbington et al., 2013, p. 425). It is characterised by a tendency to feel suspicious, with a sense that others have planned intentions of harm towards the self (Freeman & Garety, 2000).

1.4. Shame

PTEs are extremely stigmatised (e.g., Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000), and stigmatising beliefs contribute to the social exclusion and distress associated with such experiences. Stigma is also a key barrier to help seeking, causing high levels of social anxiety and shame in individuals who have PTEs (Birchwood et al., 2007; Corrigan & Watson, 2002; Thornicroft, 2007). Whilst the stigma of PTEs has received much research attention, one potentially influential variable within PTEs which has received less attention, is shame. This is particularly the case with unusual experiences and beliefs. It would be expected that shame is strongly linked to PTEs given the associations between the internalisation of stigma and shame in people diagnosed with psychosis (Birchwood et al., 2007). Furthermore, as shame concerns how an individual

compares to and is perceived by others (Gilbert, 2005, 2009) it maps onto many common features of PTEs, including paranoid or persecutory beliefs, or hearing a dominant voice (Collip, Oorschot, Thewissen, van Os, & Bentall, 2011). The conceptualisations of shame within the literature are worth considering before examining its role within PTEs.

1.4.1. Conceptualisations of shame

Shame has been seen as a negative emotion cross-culturally (Brown, 1991; Edelstein & Shaver, 2013; Fessler, 1999) and historically (Broucek, 1991; Matos, 2012; Tissari, 2005). Extensive research and theorising about shame has been conducted from various perspectives, in disciplines such as psychology, sociology and philosophy. Unsurprisingly, this has led to shame being conceptualised in many different ways. Darwin (1872, 1965) defined shame as an adaptive and universal emotion, characterised by slumped shoulders and a lowered head. Similarly, Tomkins (1981) believed that shame is an innate emotion that incorporates a unique posture and facial expression. Gilbert (1998a) proposes that shame can be measured with regard to its interpersonal, cognitive or behavioural elements, and can be seen as a primary, secondary or composite emotion. Different opinions also exist around when shame develops, for example, during the first few months of life (Nathanson, 1992; Schore, 1994) to the age of 2-3 years (Lewis, 1993, 1995; Stipek, 1995).

To define the experience of shame further, efforts have been made to separate it from other emotions such as guilt, disgust and humiliation. This has given rise to debates within the literature, however. As a comprehensive review is outside the scope of this chapter, additional information may be found in Gilbert (1998a). Whilst shame and guilt have been regarded as interchangeable constructs in psychological literature historically (Tomkins, 1962), a clear distinction between them has been made in recent years (Gilbert, 2003; Kim, Thibodeau, & Jorgensen, 2011). Shame features global negative self-evaluation at the cost of attention towards others (Cozolino, 2006; Tangney & Dearing, 2002), with the aim of restoring ones' reputation or social status (Fessler, 2004; Gilbert & McGuire, 1998). Comparatively, guilt leads to an outwards direction of attention towards others, with particular behaviours as the focus of negative evaluation, and the aim of resolving and repairing relationships (Gilbert, 2004;

Lewis, 1971). This distinction has received empirical support from several studies (e.g., Ferguson, Stegge, & Damhuis, 1991).

The definition of shame as a global negative evaluation is important when understanding why it features in a range of psychological difficulties (Gilbert, 2010), whilst only weak correlations have been found between guilt and psychological difficulties (Tangney, Wagner, & Gramzow, 1992). A strong evidence base exists that distinguishes shame from other self-conscious emotions such as guilt, embarrassment and pride, with regard to their phenomenology and relationship with psychological adjustment (Gilbert, 1997, 1998a; Harder, 1995; Lindsay-Hartz, de Rivera, & Mascolo, 1995; Tangney, Miller, Flicker, & Barlow, 1996).

1.4.2. The impact of shame

Shame can merge into a sense of one's identity (e.g., as inadequate, unlovable, a failure; Gilbert, 1998a, 2003, 2007; Kaufman, 1989; Tangney, 2003) and can therefore have a significant impact on how we view ourselves and behave (Gilbert & McGuire, 1998; Leary, 2007; Lewis, 1971, 1995; Tangney & Dearing, 2002). People with high levels of shame often feel less safe in relationships and can struggle interpersonally (Gilbert, 2010). It has been shown to impact the development and maintenance of social anxiety and depression (Gilbert, 2000a; Mills, 2005) and evidence is increasing for shame and other mental health difficulties (Andrews, Brewin, Chris, Rose, & Kirk, 2000; Goss & Allan, 2009). Indeed, shame has been regarded as the "bedrock of psychopathology" (Miller, 1996, p.151). Consequently, shame may be seen as a transdiagnostic moderator of the severity of mental health difficulties (e.g., Neff, Rude, & Kirkpatrick, 2007). However, the core of what is shaming is greatly defined by cultural values and social norms (Fessler, 2007; Leeming & Boyle, 2004).

This study positions itself within the methodologies and definitions of recent shame research stemming from Gilbert's (1998a) biopsychosocial model.

1.4.3. The biopsychosocial model of shame

Building on the more social conceptualisation of shame, Gilbert (1998a) developed the biopsychosocial model of shame to elucidate the multi-faceted

elements that make up this emotion. In proposing that shame stems from humans innate motives for attachment (Bowlby, 1969/1982; Cassidy & Shaver, 1999), group belonging (Baumeister & Leary, 1995) and concern with social ranking (Gilbert, 1989, 1992, 2000a), the model corresponds to evolutionary psychology (e.g., Buss, 2003), attachment theory (Bowlby, 1969, 1973; Kohut, 1977) and neuroscience.

Attempts to be accepted, loved, and chosen by others for social roles, drive individuals to establish relationships by ensuring that others hold positive images of the self, thus preventing rejection and isolation (Gilbert, 1989, 1997, 1998a, 2007, 2010). From this perspective, shame has evolved as a warning sign, informing individuals that they are unable to elicit positive feelings in others. This then leads to self-monitoring, self-blaming and submissive responses (Matos, Pinto-Gouveia, & Costa, 2013) to protect oneself from the risk of rejection, exclusion and attacks (Gilbert, 1997, 2002, 2003, 2007; Gilbert & Irons, 2009). The model highlights the significance of social positions and cultural values in determining who is accepted or rejected within social groups (Gilbert, 2006). The key to shame and self-to-self relating throughout life is the way in which others were, and are, experienced as relating to the self. Although numerous theories of shame exist, the biopsychosocial model of shame is widely drawn upon in shame and shame memory research (e.g., Matos et al., 2012; Pinto-Gouveia et al., 2014).

1.4.4. External and internal shame

Gilbert (1998a) distinguished between external and internal shame. External shame is accompanied by thoughts that others view one as flawed, undesirable and inadequate; namely, they look down on the self with contempt or condemnation and will disengage or harm the self. All attention and cognitive processes are attuned externally, to the social world and to what is happening in the mind of the other (Matos, 2012). To cope with external shame, people may adopt defensive manoeuvres (e.g., pacifying, avoiding) in an attempt to positively alter one's image in the mind of the other (Gilbert, 1998b, 2000a, 2007). Conversely, if a negative evaluation is turned inwards towards one's self-identity and the self is perceived as globally flawed, undesirable and inadequate, internal shame is experienced (Gilbert, 2002, 2003; Matos, 2012).

Internal shame is accompanied by negative automatic thoughts about the self. These involve self-criticism and self-attacking (e.g., I am worthless) and depict self-devaluations and internally shaming thoughts (Matos, 2012).

Many studies have established an association between external shame and mental health difficulties (e.g., Pinto-Gouveia & Matos, 2011), particularly with experiences of paranoia (Gilbert et al., 2005; Matos, Pinto-Gouveia, & Gilbert, 2013; Mills, Gilbert, Bellew, McEwan, & Gale, 2007; Pinto-Gouveia, Matos, Castilho, & Xavier, 2014). Within psychosis, external shame can prevent affiliative connections to others and increase avoidance and social anxiety (Birchwood et al., 2007). Internal shame has been associated with social anxiety, depression, hopelessness, and a poorer prognosis for personal "recovery" in individuals with PTEs and stigma (Birchwood et al., 2007; Pinto-Gouveia, Castilho, Matos, & Xavier, 2013; Pinto-Gouveia et al., 2014; Turner, Bernard, Birchwood, Jackson, & Jones, 2013; Vass, Sitko, West, & Bentall, 2015).

External and internal shame are intimately connected, as they are both key for social functioning and feature in shame experiences, fuelling each other (Gilbert, 2007; Kim et al., 2011). Early experiences of being shamed are highly relevant to the development of both external and internal shame in adulthood (e.g., Matos et al., 2012; Matos, Pinto-Gouveia, & Gilbert, 2013).

1.5. Shame memories

Early shaming experiences, in which the self is experienced as defective and worthless in the context of being dismissed, condemned, shunned or abused, can generate shame memories (SMs) that lead to negative self-evaluation and psychological distress (Gilbert, 2003). Examples of common SMs include hurtful bullying, parental criticism, and sexual impotency. Such experiences can be internalised as negative internal working models of the self (e.g., as defective, worthless, and appraised negatively by others), and lead to self-criticism, appeasement and avoidance (Baldwin & Dandeneau, 2005; Castilho, Pinto-Gouveia, & Coelho, 2011; Mikulincer & Shaver, 2005, 2007).

The biopsychosocial model holds that SMs can heighten shame-proneness, and in turn increase the degree to which shame is experienced across different contexts (Lewis, 1971). Indeed, SMs have repeatedly been associated with shame in adulthood (Andrews, 2002; Gilbert, Allan, & Goss, 1996, Gilbert & Gerlsma, 1999; Matos & Pinto-Gouveia, 2010; Matos, Pinto-Gouveia, & Duarte, 2011; Schore, 1998; Webb, Heisler, Call, Chickering, & Colburn, 2007).

The importance of noting key details of SMs such as who featured as the "shamer" has been shown, as this affects the experience of shame and distress in adulthood. For example, a stronger association has been found between "attachment SMs" and internal shame, and "non-attachment SMs" and external shame (Matos & Pinto-Gouveia, 2014; Matos, Pinto-Gouveia, & Costa, 2013). However, as children and adolescents can experience trust, security and validation within a variety of significant relationships, theories of secondary attachment have challenged the distinction between attachment and non-attachment figures in proposing that other relationships (e.g., with teachers, grandparents, aunts/uncles) can fulfil the same role as primary attachment figures (Mikulincer & Shaver, 2007; Rhodes, Spencer, Keller, Liang, & Noam, 2006; Ryzin, 2010).

1.5.1. Autobiographical memory features

SMs are registered in autobiographical memory (AM) as emotionally significant experiences that increase vulnerability to shame-based problems (e.g., depression; Matos et al., 2011). AM concerns memory for personal life events and is integral to one's self-concept (Conway & Pleydell-Pearce, 2000).

AM theorists (Conway, 2005; Talarico, LaBar, & Rubin, 2004) argue that these memories are commonly used to recreate current emotional states, and AM properties have been shown to be relevant to psychological distress (Berntsen, Willert, & Rubin, 2003; Wenzel & Jordan, 2005). For instance, Berntsen et al. (2003) revealed that for individuals experiencing "post-traumatic stress disorder" (PTSD), traumas create dysfunctional reference points for the organisation of personal memories, which result in fluctuations between vivid intrusions and avoidance. This led researchers from the University of Coimbra, Portugal, to

undertake a series of studies examining the traumatic and centrality features of SMs.

1.5.2. Traumatic and centrality features

SMs can involve traumatic memory features, producing intrusions, hyperarousal and emotional avoidance. Traumatic SMs have been found to impact on feelings of shame in adulthood, and to increase the impact of shame on depression (Matos & Pinto-Gouveia, 2010, Pinto-Gouveia & Matos, 2011).

SMs can also become central to identity; structuring one's life story and generating reference points that give meaning to experiences (Berntsen & Rubin, 2007; Dickerson & Kemeny, 2004; Matos & Pinto-Gouveia, 2010, 2014; Matos et al., 2012; Pinto-Gouveia et al., 2014). Pinto-Gouveia and Matos (2011) drew on the Centrality of Event Theory (CET; Berntsen & Rubin, 2006), which was established to understand the construct of PTSD. The CET holds that self-concept is formed by the activation of extremely accessible memories. Shame experiences from childhood or adolescence that act as central SMs have been linked to internal and external shame in adulthood, and increased susceptibility to depression, anxiety, stress, and more recently, paranoia (Matos & Pinto-Gouveia, 2010, 2014; Matos et al., 2012; Matos, Pinto-Gouveia, & Gilbert, 2013; Pinto-Gouveia & Matos, 2011; Pinto-Gouveia et al., 2013, 2014). The importance of assessing the traumatic and centrality of SMs has therefore been highlighted, particularly amongst individuals who are experiencing psychological difficulties such as paranoia.

1.6. Shame memories and psychotic-type experiences

Childhood adversities, especially those related to interpersonal traumas or close interpersonal relationships, cause people to establish beliefs about themselves as being vulnerable and others being a source of threat. Psychosocial models of psychosis emphasise the significance of such beliefs about oneself and the social world in relation to vulnerability to and maintenance of PTEs (Garety, Kuipers, Fowler, Freeman, & Bebbington, 2001; Penn, Corrigan, Bentall, Racenstein, & Newman, 1997). Given the strong evidence base showing that a variety of adverse childhood experiences (ACEs; Hughes et al., 2017) are

associated with PTEs in adulthood (Bentall, Wickham, Shevlin, & Varese, 2012; Matheson, Shepherd, Pinchbeck, Laurens, & Carr, 2013; Read & Bentall, 2012; Read, van Os, Morrison, & Ross, 2005; Varese et al., 2012), an association between SMs and PTEs would be expected.

Hutton, Kelly, Lowens, Taylor and Tai (2013) suggest a potential pathway to PTEs, stemming from ACEs. They propose that ACEs may generate traumatic SMs (e.g., Matos et al., 2012), negative schemas about self and others (Fowler et al., 2006; Lincoln et al., 2010; Smith et al., 2006) and recurrent activation of a threat-focused mental state (Gilbert, 1989; Gumley & Schwannauer, 2006; Mills et al., 2007). In conjunction with negative beliefs about others, this continuous and unregulated sense of threat may then be misattributed to an external source, ultimately leading to the development of paranoia and persecutory unusual beliefs (Hutton et al., 2013). Indeed, research demonstrates that shame and SMs play a significant role in paranoia (Matos, Pinto-Gouveia, & Gilbert, 2013; Pinto-Gouveia et al., 2013).

1.7. Shame and psychotic-type experiences

Research on shame and PTEs has predominantly focused on paranoia and voice-hearing. The little attention on shame in relation to unusual beliefs and other unusual experiences is surprising considering the substantial empirical exploration it has received across a variety of mental health difficulties; demonstrating greater vulnerabilities to depression (Andrews, Qian, & Valentine, 2002; Cheung, Gilbert, & Irons, 2004; Tangney, Stuewig, & Mashek, 2007; Thompson & Berenbaum, 2006) anxiety (Levinson, Byrne, & Rodebaugh, 2016; Pinto-Gouveia & Matos, 2011) and paranoia (Gilbert, Boxall, Cheung, & Irons, 2005; Matos et al., 2012; Matos, Pinto-Gouveia, & Gilbert, 2013; Mills et al., 2007; Pinto-Gouveia et al., 2014). Furthermore, for many who have PTEs, shame is present and is related to difficulties managing emotions (Birchwood, Iqbal, Chadwick, & Trower, 2000; Michail & Birchwood, 2012; Rooke & Birchwood, 1998). Indeed, self-shaming has been found to contribute to the development of distressing PTEs (Hutton et al., 2013; Mills et al., 2007). Research has shown that shame moderates an individual's response to psychosis (Birchwood et al., 2007). Shame may therefore be an integral feature

in understanding people's experience of and response to PTEs and could have considerable consequences for the course of such experiences (Turner et al., 2013).

Qualitative research exploring the experiences of people diagnosed with psychosis has shown that the theme of shame is present, especially regarding feelings such as the embarrassment of being "crazy", having let loved ones down by falling short of one's standards, and an awareness of being treated differently as a result of the diagnosis (Loughbran, 2011).

1.7.1. The stigma of psychotic-type experiences

PTEs are highly stigmatised (e.g., Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009), and psychosis is one of the most stigmatised mental health diagnoses (Angermeyer & Matschinger, 2003; Jorm & Wright, 2008). Indeed, studies indicate that individuals who have PTEs experience higher levels of shame and stigma than the "general population" (Turner et al., 2013), and those with other mental health difficulties (Arboleda-Florez, 2005; Barney, Griffiths, Jorm, & Christensen, 2006; Thompson et al., 2002). Birchwood and colleagues (2007) argue that this stigma heightens susceptibility to shame, with individuals internalising and accepting the stigma associated with PTEs, and this internalised stigma then leading to higher levels of shame. Research has shown that internal shame plays a key role in the association between stigma and its negative psychological sequelae in individuals who have PTEs (Wood, Byrne, Burke, Enache, & Morrison, 2017), and internalised stigma has been associated with distress related to unusual experiences (Pyle et al., 2015). A key aspect of such stigma and shame often involves unfavourable comparisons of oneself to others regarding one's "social rank" (Allan & Gilbert, 1995), that is, the degree to which one feels inferior to others and looked down upon (Gilbert, 2000a).

1.7.2. Social rank theory

Social rank theory offers an evolutionary paradigm that may aid an understanding of shame and PTEs (Gilbert, 2000a; Price, Sloman, Gardner Jr, Gilbert, & Rohde, 1994). It proposes that, like other animals, humans are driven to compete and secure important resources for survival. However, while this competition is mostly physical amongst other animals and non-human primates,

humans place significance in being evaluated as attractive, liked and appreciated by others (Gilbert, 2000a). Feeling wanted and valued helps people to feel safe. Moreover, they are physiologically regulating experiences which enable people to form positive images of themselves, whilst also feeling comfortable enough to form supportive and mutually beneficial relationships with others. Individuals' motives, behaviour, thoughts and emotions are shaped by perceptions and evaluations of their own, and other peoples', status, power and social rank (Gilbert, 2000a).

Low social rank often evolves from life experiences that cause people to feel threatened and unsafe, such as trauma, abuse, and bullying (Gilbert & Miles, 2000). The inferior social comparison indicative of low social rank is related to shame and submissive behaviour, and several studies have demonstrated the relevance of social rank to PTEs (e.g., Michail & Birchwood, 2012; Wood & Irons, 2016). Individuals who have received a diagnosis of psychosis have been found to view themselves as having lower social rank and being inferior to individuals who had no self-reported or diagnosed mental health difficulties (Allison, Harrop, & Ellett, 2013). Regarding distinct PTEs, low social rank has been related to unusual experiences (Birchwood, Meaden, Trower, Gilbert, & Plaistow, 2000; Fox, Gray, & Lewis, 2004; Gilbert et al., 2001) and paranoia (Freeman et al., 2005; Gilbert et al., 2005).

1.7.3. Shame and paranoia

Whilst emotions such as shame are clearly important in paranoia, their precise contribution remains unclear (Cromby & Harper, 2009). It has been shown that early memories of shame, submissiveness and threat predict paranoia (Pinto-Gouveia et al., 2014), and positive associations have been found between internal shame and paranoia in clinical samples (Bertoldi, 2003; Johnson et al., 2014). Research has demonstrated a significant association between low social power, submissive behaviour and internal shame in a "non-psychotic" clinical sample (Gilbert et al., 2005).

As mentioned previously, several studies have established an association between external shame and paranoia (e.g., Pinto-Gouveia et al., 2014). Furthermore, increased levels of paranoia and external shame not only relate to

reduced social interactions but also to the quality of these interactions (Allison et al., 2013; Birchwood et al., 2007). It is likely that there would be a strong association between external shame and paranoia given that such beliefs centre around interpersonal threats due to perceived malevolent and persecutory intentions from others towards the self (e.g., Freeman & Garety, 2004; Freeman et al., 2005).

When considering the function of paranoia, Colby and colleagues proposed that paranoia enables the avoidance of underlying shame through the attribution of perceived inadequacy to external sources (Colby, 1975; Faught, Colby, & Parkison, 1977). Harper and Cromby (2013) have suggested that paranoia often develops during difficult life experiences and may present a compensatory function to the aversive emotions these can cause, especially feelings of shame. Further understanding of the relationship between paranoia and shame in people who have PTEs could help inform therapeutic interventions for those who are distressed by paranoid thoughts.

1.7.4. Shame and unusual beliefs

Little research has explored the relationship between shame and unusual beliefs. For many years two competing hypotheses existed regarding whether unusual beliefs defend against negative emotions (the delusion-as-defense account; Neale, Oltmanns, & Maher, 1998), or are a direct reflection of emotional concerns (the emotion-consistent account; Freeman, Garety, Kuipers, Fowler, & Bebbington, 2002). This former hypothesis holds that the content of unusual beliefs strongly relates to significant events in individual's lives, and unusual beliefs may alleviate some of the painful psychological burden associated with these. Unusual beliefs may thus be understood as protective responses to disruptive and traumatising life events (Gunn & Bortolotti, 2018). The emotion-consistent account views persecutory unusual beliefs as an extension of anxious and depressive concerns about one's vulnerability and low self-worth. Indeed, there is increasing agreement that depression and low self-esteem are related to persecutory unusual beliefs (Garety & Freeman, 2013). Similarly, Beck and Rector (2005) suggest that "grandiose delusions may develop as a compensation for an underlying sense of loneliness, unworthiness, or powerlessness" (p. 588). Given the aversive

nature of shame and its prevalence amongst people with PTEs, it seems likely that unusual beliefs may act as a defence against it or, a reflection of it. Further research is needed to gain more of an understanding of the role shame may play in unusual beliefs.

1.7.5. Shame and unusual experiences

The unusual experience that has received most attention in relation to shame is that of hearing voices. Shame often features in the first-person accounts of people who hear voices (Connor & Birchwood, 2013; Corstens & Longden, 2013; McCarthy-Jones et al., 2015; Romme et al., 2009), and may therefore aid an understanding of the content and structure of some voice-hearing experiences (Woods, 2017).

When considering shame from the perspective of social rank theory (Gilbert, 2000a), it seems likely to influence how voices are perceived, with a mirroring between the emotion of shame and people's relationships with their voices. Carden, Saini, Seddon, Evans, and Taylor (2019) found that shame was only related to negative voice-hearing qualities. Indeed, voices are commonly perceived as dominant and shaming and/or to be aware of shaming information about individuals (Birchwood et al., 2004; Byrne, Trower, Birchwood, Meaden, & Nelson, 2003; Chadwick & Birchwood, 1994; Nayani & David, 1996). A relationship has also been found between levels of shame and levels of malevolent voice-hearing (Connor & Birchwood, 2012).

It has been argued that the relationship an individual has with their voices also influences the level of distress experienced (Demjén, Marszalek, Semino, & Varese, 2019; Hayward, Bogen-Johnston, & Deamer, 2018; Mawson, Cohen, & Berry, 2010). This relationship is determined by interpersonal schemata which have developed from previous relationship experiences (Birchwood, Meaden, et al., 2000; Chadwick & Birchwood, 1994). Such findings support clinical understandings of paranoia and unusual beliefs which highlight the role of early experiences and the influence these have on models of the self, others and coping (Dickson, Barsky, Kinderman, King, & Taylor, 2016). In support of social rank theory (Gilbert, 2000a), research has shown that the power differential felt between the self and the social world is a crucial predictor of the power

differential between an individual and the voices they hear (Birchwood, Meaden, et al., 2000; Gilbert et al., 2001).

Relationships have also been established between the power of voices and behavioural tendencies related to shame, particularly the desire to escape and hide (Gilbert et al., 2001). Although there is increasing interest concerning the psychological, evolutionary, and phenomenological elements of shame and voice-hearing (McCarthy-Jones, 2017; Woods, 2017), minimal research has examined the relationship between shame and other unusual experiences.

1.8. Compassion

One therapeutic avenue for individuals who have PTEs involves the construct of compassion (e.g., Braehler et al., 2013; Heriot-Maitland, McCarthy-Jones, Longden, & Gilbert, 2019), and attention has recently focused on compassion and shame-based problems (Gilbert, 2010, 2014; Neff, 2011). It is worth considering the nature of compassion before examining the role it may play within shame, SMs and PTEs.

1.8.1. What is compassion?

Compassion can be seen as the "sensitivity to the suffering of the self and others, with a deep commitment to try and alleviate and prevent it" (Gilbert, 2010, p.10). The restorative qualities of compassion have been recorded for centuries. The Dalai Lama frequently emphasises a focus on compassion in the quest for happiness (Dalai Lama, 1995, 2001) and the elements of compassion are now being examined within Western psychology (Davidson & Harrington, 2002; Davidson et al., 2003; Gilbert 2000b, 2009; Neff 2003a, 2003b). Three key "flows of compassion" are considered to engender feelings of warmth and kindness; 1) compassion towards others, 2) compassion from others and 3) compassion towards the self (i.e., self-compassion; Gilbert, 2009; Gilbert et al., 2011; Neff 2003a, 2003b).

Neff (2003b) defines self-compassion as comprising three interrelated elements that are displayed at points of pain and failure: (i) being kind and understanding towards oneself rather than self-critical, (ii) seeing one's experiences as part of

the larger human experience as opposed to in isolation and (iii) holding one's painful thoughts and feelings in mindful awareness as opposed to over-identifying with them. Robust evidence has shown that self-compassion is related to better well-being as evidenced by lower depression, anxiety and stress (Laithwaite et al., 2009; Macbeth & Gumley, 2012). Compassion is also highly relevant to shame, PTEs and SMs (e.g., Mills et al., 2007).

1.8.2. Compassion, shame and psychotic-type experiences

Imagining a compassionate other has been found to reduce paranoia and negative emotion (Lincoln, Hohenhaus, & Hartmann, 2012), and greater narrative compassion can counteract feelings of shame and paranoia (Gumley & Macbeth, 2014).

Building on the biopsychosocial model, Gilbert (2009) developed Compassion Focused Therapy (CFT) as a transdiagnostic mode of therapy to help people with high levels of shame to experience compassion (e.g., Gilbert, 2009; Rector, Bagby, Segal, Joffe, & Levitt, 2000). CFT has been found to play a central role in reducing shame, paranoia, and the malevolence of voice-hearer's hostile voices (Braehler et al., 2013; Gilbert, 2009, 2010, 2014; Gilbert et al., 2011; Mayhew & Gilbert, 2008; Neff, 2011).

An association has also been found between reduced self-reassurance (a component of self-compassion) and increased paranoia (Boyd & Gumley, 2007; Mills et al., 2007), submission and shame (Gilbert et al., 2010). Correspondingly, self-compassion has been found to reduce psychotic "symptoms" in individuals diagnosed with schizophrenia (e.g., Eicher, Davis, & Lysaker, 2013). Indeed, in a qualitative study, shame-based self-criticism was associated with increased PTE-related distress, whilst self-compassion was associated with empowerment and growth (Waite, Knight, & Lee, 2015).

Self-compassion has also been shown to reduce distress in individuals who hear voices (Dudley, Eames, Mulligan, & Fisher, 2017), and research has demonstrated that the more someone hearing voices can reassure themselves, the less shameful the content of their voices (Connor & Birchwood, 2013).

1.8.3. Compassion, shame memories and psychotic-type experiences

Research has demonstrated that the traumatic and centrality properties of SMs can be moderated by compassion (Ferreira, Matos, Duarte, & Pinto-Gouveia, 2014). However, some individuals, especially those high in self-criticism, can find this challenging, aversive or even threatening (Gilbert et al., 2012; Gilbert, McEwan, Matos, & Rivis, 2011). It has been suggested that SMs may be responsible for such difficulties experiencing and receiving compassion from others (Matos & Pinto-Gouveia, 2014), and fears of compassion may prevent "recovery" in people with high levels of shame (Gilbert et al., 2011).

The account above outlines the variables of interest in this study (i.e., PTEs, SMs, shame, and compassion), contextualising them within the current literature and drawing attention to the gaps in the research base. The following sections expand on this by reviewing the pivotal studies relating to these variables. This will further demonstrate gaps in the research base, hence establishing this study's research questions. The first literature review will focus on the relationship between shame and PTEs, and the role compassion plays within this. The second literature review will examine the impact of early shame experiences on shame and PTEs in adulthood, and the relationship between SMs and compassion.

1.9. Literature review I: shame, psychotic-type experiences and compassion

To identify the relevant literature, the following terms; "shame", "self-criticism", "self-blame" and "self-hatred" were entered into Academic Search Complete, CINALH Plus, PsycINFO, Science Direct, Scopus and Psycharticles, together with terms related to PTEs and compassion. Grey literature was also examined through the use of Google Scholar and other open source platforms. Further information such as the limiters used, inclusion and exclusion criteria and the number of articles identified can be found in Appendix A. A total of six studies were retrieved. A narrative review will now be provided to summarise the studies.

1.9.1. Shame and psychotic-type experiences

Four studies investigating the relationship between shame and PTEs were retrieved. Matos, Pinto-Gouveia and Gilbert (2013) measured external and internal shame, properties of SMs, social anxiety and paranoia, in a sample of 328 participants recruited from the general population in the district of Coimbra, Portugal. Participants' mean age was 37.3 years, ranging from 20 to 70 years, and 67% of the sample were women. The authors showed that (though there were clear overlaps) external shame was more associated with paranoia, while internal shame was more associated with social anxiety. However, the use of the Experience of Shame Scale (ESS; Andrews et al., 2002) to measure internal shame raises some concerns as it includes some items that may be associated with external shame (e.g., "Have you worried about what other people think of you when you do something wrong?"). Further research examining external and internal shame, properties of SMs and paranoia is thus needed, with a more valid measure of internal shame.

Johnson and colleagues (2014) examined shame in 60 adults with "non-psychotic" mental health difficulties. Participants were aged between 16-25 years old and were living in the UK. 70% of the sample were women. This was the first study to explore whether there was a direct association between shame and paranoia, and whether shame moderated this association. Results indicated that shame was positively associated with paranoia, above the variation explained by stressful events. Shame was also found to moderate the association between stressful events and paranoia. Furthermore, shame strengthened the association between stress and paranoia in individuals who reported high levels of shame. However, this study used the ESS as a measure of general shame. As the ESS has previously been used to measure internal shame (Matos, Pinto-Gouveia, & Gilbert, 2013), and been criticised for overlapping with external shame, it may not be a valid measure of general shame.

Castilho and colleagues (2017) used a series of self-report questionnaires to investigate the relationships between external shame, paranoia, and social safeness in 37 participants living in the district of Coimbra, Portugal. Participants had been diagnosed with psychotic "disorders". The average age of

participants was 37.14, and 81% of the sample were male. In keeping with previous research, their findings demonstrated that external shame was positively related to both frequency of paranoia and the distress that it caused. These results suggest that external shame can increase the likelihood of paranoid attributions being recruited as a safety strategy. This mode of thinking could then be related to feeling vulnerable to threat and perceiving others as dangerous and hostile (Garety et al., 2001). However, this study was limited by the size and representativeness of the sample.

These results support previous findings which suggest a role for shame in paranoia (Matos et al., 2012; Pinto-Gouveia et al., 2014), and psychosis (e.g., Michail & Birchwood, 2012). They indicate that high levels of shame may lead to susceptibility to paranoia within clinical groups, and that resistance to experiencing shame may be a marker of resilience (Johnson et al., 2014).

The aforementioned studies are limited by their cross-sectional designs, meaning only tentative causal interpretations can be made. Given the evidence regarding the different consequences of internal and external shame (e.g., Matos, Pinto-Gouveia, & Duarte, 2013) it is important to measure both, as separate constructs. Moreover, as the only PTE to be examined within these studies is paranoia, the relationship between shame (internal and external) and unusual experiences and beliefs remains unknown. As paranoia has been found to predict subsequent increases in other PTEs (Kramer et al., 2013), these findings suggest that future research is needed.

Wood and Irons (2016) conducted a cross-sectional correlational study to explore the relationship between external shame, social rank, PTEs and personal recovery. It also aimed to examine whether depression mediated these relationships. Fifty-two participants from the UK who had been diagnosed with a psychotic-type “disorder” (e.g., schizophrenia, psychosis) or had experienced PTEs were recruited. The average age of participants was 36.96 years, and 60% of the sample were male. The findings indicated that high levels of external shame and low social rank were significantly correlated with PTEs and lower ratings of personal recovery. These findings support social rank

theory (Gilbert, 2000a), and highlight the possible significance of social rank and shame within the course of PTEs.

This study was limited by the small sample size and non-normal distribution of some data. As the sample were not currently having PTEs, the generalisability of the findings is limited. The cross-sectional nature of the study also means that causality cannot be ascertained. Given the ongoing debate surrounding what constitutes "recovery", (particularly in psychosis; e.g., Silverstein & Bellack, 2008) attempting to measure this quantitatively may have lacked validity (Wood & Irons, 2016). Lastly, as distress related to PTEs was not measured, the potential impact of social rank and external shame on PTE-related distress remains unknown.

1.9.2. Shame, psychotic-type experiences and compassion

Scheunemann, Schlier, Ascone and Lincoln (2018) investigated the relationship between self-compassion, the frequency of "psychotic-like experiences" (PLEs), and their associated distress in a community sample in Germany (*N* = 234). Approximately two-thirds (62%) of the sample were female, and the age of participants ranged from 18-79, with a mean age of 37 years. PLEs refer to "phenomena resembling positive psychotic symptoms in the absence of illness common in the general population" (Scheunemann et al., 2018, p. 2). PLEs were measured using the Peters' Delusions Inventory (PDI; Peters, Joseph, & Garety, 1999), and the Launay-Slade Hallucination Scale (LSHS; Launay & Slade, 1981), both in the German versions (Lincoln, Keller, & Rief, 2009).

In line with previous research (Dudley et al., 2017; Eicher et al., 2013), the authors found that self-compassion was associated with less-frequent PLEs and less PLE-distress. However, the correlational design of the study means that no conclusions about causality can be made. The sample consisted of mostly female (62.4%) and well-educated participants, meaning the generalisability of the results is reduced. Moreover, it could be argued that the LSHS is a measure of auditory hallucinations rather than unusual experiences per se, as it only features one item relating to visual hallucinations, and no items regarding tasting, smelling or feeling things that other people do not. In addition, paranoia was not investigated within this study. Given the potentially beneficial impact

that self-compassion has for PTEs and their associated distress, further research examining the relationship between self-compassion and PTEs is called for.

In the first randomised controlled trial to investigate the feasibility of CFT, it was found to be related to increasing compassionate narrative in comparison to treatment as usual for people diagnosed with psychosis in the UK (*N* = 40; 55% male; Braehler et al., 2013). The average age of participants was 43.2 in the CFT group (*n* = 22), and 40.0 in the treatment as usual group (*n* = 18). Over four months, increased compassion was significantly correlated with a reduction in depression (*r* = -0.77), shame related to the diagnosis (*r* = -0.71) and fear of relapse (*r* = -0.52). This provides preliminary evidence that the development of compassion reduces the sense of exclusion and inferiority/shame due to PTEs and related low mood. However, no formal checks of treatment fidelity, therapist competence, maintenance of blinding or follow-up assessments were conducted. Furthermore, as this study was focused on emotional recovery, it did not incorporate measures of PTEs and/or their associated distress.

1.9.3. Summary of literature review I

This review has demonstrated that external shame plays a key role in the experience of paranoia, and support for the biopsychosocial model of shame and the social rank theory of psychosis is provided. However, clear gaps in the literature have been highlighted regarding the role of shame in unusual experiences and beliefs. There is therefore a need to explore whether external shame plays as key a role in unusual experiences and beliefs as it has shown in paranoia.

Whilst they are typically highly correlated, internal and external shame have different consequences and it is thus important to examine the impact of both within this study. In addition, no studies have investigated the relationship between shame (internal and external) and unusual beliefs and unusual experiences. The relationship between internal and external shame and PTEs is potentially clinically useful, however as the research has focused on paranoia and mostly been conducted on clinical populations, further research on shame and PTEs in a mixed clinical/non-clinical population is needed.

Given that the importance of self-compassion in moderating the impact of shame on PTEs has been emphasised (Braehler et al., 2013), this warrants further investigation, particularly as the potential benefits of self-compassion for individuals who have unusual beliefs and experience high levels of shame is currently unknown.

As Gilbert (1998a) hypothesised that psychological distress is underpinned by SMs, the relationship between SMs, shame, PTEs in adulthood, and whether compassion has a positive impact on such experiences, could be helpful to examine. This formed the basis for the second literature review.

1.10. Literature review II: shame memories, psychotic-type experiences and compassion

The following search terms; “shame memories”, and “early shame experiences” were entered into Psychinfo, Psycharticles, CINALH Plus, and Scopus, alongside the terms pertaining to PTEs and compassion that were used in literature review I. Grey literature was also examined. Further information on the searches can be found in Appendix B. A total of six pieces of relevant literature were retrieved. A narrative review will now be provided to summarise the studies.

1.10.1. Shame memories and paranoia

Matos, Pinto-Gouveia and Duarte (2012) examined the uniqueness of the impact of SMs by comparing SMs to memories featuring sadness and fear across two studies, with 484 students in the district of Coimbra, Portugal. The mean age of participants was 22.01, ranging from 18 to 50, and 89% of the sample were female. The regression analysis with centrality of shame, fear, and sadness memories as independent variables accounted for 10% of the variance in paranoia frequency, and 16% of paranoia distress. Moreover, centrality of SMs was the only significant global predictor of current feelings of shame (external and internal) and the only predictor of paranoia frequency and distress (as measured by the Paranoia Checklist; Freeman et al., 2005). Therefore, central SMs may cause one to develop a sense of self as inadequate,

unattractive, and defective to themselves and in the eyes of others. This may lead to an increased susceptibility to seeing others as having malevolent intentions towards the self and to thus engage in dissociative defences.

These findings support Gilbert's (1998a) biopsychosocial model, as they suggest that SMs were a significant predictor of both internal and external shame. They could also be understood from the perspective of social rank theory (Gilbert, 2000a), with the inadequate sense of self relating to low social rank, which then contributes to paranoia (Freeman et al., 2005; Gilbert et al., 2005). However, the findings cannot be generalised to other populations as the sample was a predominantly female (85%) student sample.

Following on from these findings, Pinto-Gouveia and colleagues (2013) investigated whether self-criticism mediated the relationship between centrality of SMs and depressive symptoms, and between centrality of SMs and paranoia. A series of self-report measures were given to 204 participants from the general population in Portugal. The sample mean age was 36.06, and 71% of the sample were female. Results demonstrated that centrality of SMs was significantly correlated with depression, self-criticism and self-attacking. Therefore, people whose SMs act as anchoring events for their sense of self-identity are likely to adopt self-critical processing styles. Furthermore, self-criticism was related to paranoia (Pinto-Gouveia et al., 2013). These findings fit with previous research showing that centrality of SMs and self-criticism were associated with paranoia (Matos et al., 2012; Mills et al., 2007). The fact that no mediator effect of self-criticism and self-attacking was found for paranoia suggests that centrality of SMs independently contribute to paranoia, and this is not accounted for by self-criticism. However, the low percentage of males (29%) in their sample limits the generalisability of these results. Furthermore, the levels of distress associated with paranoia in this study are unknown.

Two studies examined if there were stronger associations between external and internal shame, and certain kinds of psychological distress. Matos, Pinto-Gouveia and Gilbert (2013) examined whether SMs and current feelings of shame were differentially related to social anxiety and paranoia in a general population sample in the district of Coimbra, Portugal (*N* = 328). Participants'

mean age was 37.3 years, ranging from 20 to 70 years, and 67% of the sample were female. A stronger association was found between internal shame and social anxiety and between external shame and paranoia. Moreover, the results showed that the more traumatic and central to one's identity and life story the SM is, the greater the association with paranoia, even when current feelings of external and internal shame were considered simultaneously. This indicates that the way SMs are stored in AM may impact the way in which psychological distress is experienced, and current feelings of shame (external and internal) appear to play a significant role in these associations.

These findings link to research on traumatic memory (Ehlers & Clark, 2000) and paranoia (Freeman, 2007; Freeman et al., 2008; Gilbert et al., 2005; Salvatore et al., 2011), which suggests that traumatic SMs play a part in the maintenance of a permanent sense of threat to the (social) self, and a view of others as hostile, dominant and threatening. This may then lead to (or increase) a hyperactivation of the threat and self-protection system when faced with (perceived) threats to the self as a social agent. Furthermore, access to feelings of safeness and security may be compromised; heightening vulnerability to paranoia (Matos, Pinto-Gouveia, & Gilbert, 2013). However, as this study used the ESS to measure internal shame, the limitation mentioned previously applies.

Pinto-Gouveia and colleagues (2014) investigated how emotional memories, shame and submissive behaviour are differentially related to depression and paranoia. Measures of depression, paranoia, shame (external and internal) and the traumatic properties of SMs were given to 255 participants from the general population in Portugal. The mean age of participants was 36.96 years, and 68% of the sample were female. Results demonstrated that current feelings of external and internal shame were positively associated with levels of depression and paranoia. A stronger association was found however between internal shame and depression and between external shame and paranoia. Furthermore, traumatic SMs and the recall of threat and submissiveness were shown to predict paranoia through external shame. Therefore, external shame partially mediated the impact of emotional memories on paranoia.

This study indicated that high levels of shame may result in people experiencing distress differently, subject to whether feelings of inferiority are internalised, or attention is centred around the way others view the self (Pinto-Gouveia et al., 2014). The importance of external shame in the experience of SMs and paranoia was thus highlighted.

These findings support Gilbert's (1998a) biopsychosocial model, with the experience of not being able to create positive images/feelings in the mind of others generating a sense of the world as unsafe; leading people to adopt defensive strategies. One such defence is the internalisation of shame in which a subordinate, submissive strategy related to self-blaming and self-monitoring is adopted in an attempt to minimise harm and encourage social approval. These findings also fit with social rank theory (Gilbert, 2000a), indicating that early traumatic shame experiences may lead people to hold negative perceptions of themselves (as inferior, subordinate and powerless, i.e., internal shame) and thus engage in a range of submissive and "low rank" defensive behaviours to protect themselves and prevent harm from others.

1.10.2. Shame memories and compassion

Ferreira, Matos, Duarte and Pinto-Gouveia (2014) examined whether self-compassion moderated the impact of SMs for 34 participants diagnosed with an "eating disorder" in Portugal. The age of participants ranged from 14 to 44 years old, with a mean age of 24.56 (gender of participants not specified). The results demonstrated a negative association between self-compassion and the traumatic and centrality properties of SMs. Moreover, self-compassion was found to moderate the relationship between SMs and the severity of the eating disorder for individuals who reported low or medium levels of traumatic and centrality properties of SMs. These findings highlight the importance of examining the phenomenology of SMs and helping individuals to develop greater self-compassion.

Matos, Duarte, and Pinto-Gouveia (2017) investigated whether SMs contributed to fears of compassion. They did this by examining the relationship between SMs, early memories of warmth and safeness, fears of compassion, depression, anxiety and paranoia in 302 individuals (56% female) from the

general population in Portugal. Participants' mean age was 36.28, ranging from 18 to 62. Their results revealed that individuals with heightened fears of compassion experienced higher levels of paranoia. Furthermore, fears of self-compassion mediated the effects of shame traumatic memory (partially) and centrality of SM (fully) on paranoia, and traumatic SMs had a direct effect on paranoia. These findings suggest that SMs that function as trauma memories and become central to one's identity may foster the notions of self-compassion and receiving compassion from others as frightening.

Though these studies provide valuable clinical implications, their cross-sectional designs mean that causal conclusions cannot be made. In addition, the use of convenience sampling may limit the generalisability of the findings. The studies could also be criticised for the lack of reliability that comes with asking participants to recall memories concerning past shaming experiences. However, Brewin, Andrews, and Gotlib (1993) showed that the recall of childhood experiences tended to be accurate and stable over time and was not influenced negatively by current mood states. Moreover, the studies were more concerned with investigating the subjective experience of shaming experiences as opposed to proving their accuracy. Other than the study by Matos and colleagues (2012), all the studies discussed above used the General Paranoia Scale (GPS; Fenigstein & Vanable, 1992) to measure paranoia. Though this is the most widely used dimensional measure of paranoia, it has been criticised as some of the items are negatively affectively valanced (Freeman et al., 2005), and it does not provide an estimate of the frequency of paranoid thoughts, the degree of conviction, and their associated distress.

1.10.3. Summary of literature review II

Despite the aforementioned limitations to these studies, the presence of large-scale studies provides strong evidence for the associations between external shame and paranoia, and between the properties of SMs with shame, paranoia, and its associated distress. None of the literature identified examined SMs in relation to unusual experiences or beliefs, which may be important considering the associations between SMs and paranoia, the strong evidence base regarding the prevalence and impact of shame in people with PTEs (e.g., Birchwood, Iqbal et al., 2000), and the link between ACEs and the development

of PTEs (e.g., Matheson et al., 2013). Furthermore, it remains unknown whether self-compassion would help protect against the impact of SMs in individuals with unusual experiences and beliefs.

This study aimed to attend to the gaps in the research base by exploring shame and SMs in the context of PTEs with a UK mixed clinical/non-clinical sample. It is the first known study to investigate PTEs, PTE-related distress, and internal and external shame within this cohort, whilst positioned within Gilbert's biopsychosocial model and social rank theory. Moreover, SMs were investigated within this cohort for the first time in the literature, alongside their relationships with shame (internal and external), PTEs, PTE-related distress, and self-compassion.

1.11. Study rationale

The two reviews demonstrated clear gaps within the current literature. A robust body of theoretical and empirical accounts have highlighted the relationships between shame and SMs on general human functioning and psychological well-being (Gilbert, 1998a, 2007; Matos & Pinto-Gouveia, 2010; Pinto-Gouveia & Matos, 2011; Tangney & Dearing, 2002). Given the prevalence of paranoia, unusual beliefs and experiences across both clinical and non-clinical populations, these PTEs clearly warrant further investigation. When considering the continuum account of these experiences, there may be many people who have PTEs but have not yet been represented within the research, hence the importance of recruiting a mixed clinical/non-clinical sample. Due to the influence that the properties of SMs have on the experience of shame and paranoia in adulthood, the importance of examining these has been highlighted. Whilst the relationships between shame and paranoia and shame and voice-hearing have been examined (Connor & Birchwood, 2012, 2013; Hutton et al., 2013; Matos, Pinto-Gouveia, & Gilbert, 2013), research on shame and unusual beliefs is lacking, and SM research has focused only on paranoia.

Whilst this study aims to replicate previous findings within the body of research in this area, the extension of the study is novel within the current SM research. The relationship between the variables of interest in this study have not been

examined in this sample before and for some, (i.e., SMs and unusual beliefs), not in any population. Furthermore, this is the first study to examine these variables within the UK. This is important due to the fact that different settings have inevitably impacted previous research findings, and further knowledge is needed regarding what contexts and with whom such findings will potentially be replicable (Bonell, Fletcher, Morton, Lorenc, & Moore, 2012). Exploration into the potential relationships between self-compassion, shame, SMs, PTEs and their associated distress in a UK-based sample is thus called for.

1.12. Clinical utility

By exploring shame within Gilbert's (1998a) biopsychosocial model, this study hoped to contribute further understanding of the relationships between SMs, shame, PTEs and self-compassion. This is highly clinically relevant given the negative psychological impact of early shaming experiences and high levels of shame. Moreover, the current study hoped to instigate the process of exploring whether SMs could be helpful to consider in therapeutic work with people who have unusual beliefs and experiences. It aimed to shed light on individuals who may be more vulnerable to the impact of shame and SMs and/or may need particular consideration with regard to therapeutic interventions.

1.13. Research questions

As these constructs have not previously been investigated within this population or within the UK, it was more appropriate for the study to be guided by broad research questions rather than specific hypotheses.

The rationale and aims of this study informed the following research questions:

1. What are the characteristics of SMs?
2. Do the traumatic and centrality properties of SMs predict:
   a) internal shame
   b) external shame

3a. Do the properties of shame memories (centrality and traumatic) predict the distress associated with:

- unusual experiences
- unusual beliefs
- paranoia

3b. Does shame (internal and external) act as a moderator for these relationships?

3c. Does self-compassion act as a moderator for these relationships?

2. METHOD

2.1. Overview

This chapter begins with an outline of the study's epistemological position, before detailing the ethical considerations associated with its design and implementation. The design of the study and materials used are subsequently described, before finally considering the analytic strategy employed.

2.2. Epistemology

Epistemology can be defined as "the study of the nature of knowledge and the methods of obtaining it" (Burr, 2003, p. 92). Epistemological positions can be understood as falling into three categories: realist, phenomenological, and social constructionist (Willig, 2012). Realist knowledge is rooted in ontological realism, as it endeavours to examine processes which are assumed to exist independently from the researcher's awareness.

Realism encompasses a continuum from naive to critical. Within a naive realist position, knowledge is regarded as fact and directly mirrors a universal reality. Consequently, it is assumed that knowledge can be directly gathered through scientific investigation (e.g., observation). This position is known as positivism and can be seen in the medical conceptualisation of mental health difficulties, which continues to influence psychiatric and clinical psychology practice. A more critical shift transpired following the notion that the viewpoint of the observer has an influence on what is perceived. Godfrey-Smith (2000) outlines how theory-laden observation can be, which indicates that observational evidence is too corrupted by theoretical assumptions to ever be regarded as neutral and unbiased. Questioning of the concept of neutrality became the basis of more critical, post-positivist views.

Critical realism sits between a direct realist and social constructionism position (Pilgrim, 2015; Pilgrim & Bentall, 1999). As with direct realists, it holds that a material world exists independently from the researcher and can be explored,

whilst acknowledging that scientific investigation is not a pure reflection of "reality" but is affected by the social, cultural, political and historical context within which the activity is positioned (Bhaskar, 1998). Contrastingly, a "strong" social constructionist perspective is grounded in ontological relativism, which endeavours to comprehend how reality is constructed through discursive actions (Burr, 2003).

Critical realism encourages attempts to examine reality, but to do this in a critical and cautious manner. This position emphasises the generalising task of scientific activity by attempting to find mechanisms that give rise to empirical phenomena (Alvesson & Skoldberg, 2009) whilst also functioning as an agency of human emancipation (Bhaskar, 1998). Pilgrim and Bentall (1999, p. 271) suggest that critical realism is a more effective approach to mental health research as it "respects empirical findings about the reality of misery and its multiple determinants but does not collapse into...naive realism".

In accordance with a critical realist epistemological position, the current study aimed to examine and quantify phenomena (such as SMs) within a material reality that the researcher considered to exist independently of personal experience and across time. It assumed that the experience of participants was "real" (e.g., PTEs), and can be measured (e.g., through self-report questionnaires). However, it was noted that the measures used were developed within a certain historical, cultural and social context, and participants may not have been entirely conscious of all the components that influenced their experience, such as family ideals, cultural expectations, and the history of the construct itself. The attempt to measure these experiences therefore does not intend to mirror reality or absolute truth; it is indirect and interpreted tentatively within the current context and in light of the limitations.

2.3. Ethical considerations

2.3.1. Ethical approval

The study was registered with University of East London (UEL), from which ethical approval was granted (see Appendix C). The study complied with the BPS Ethics Guidelines for Internet-mediated Research (2017b) and Code of

Human Research Ethics (2014). As participants were not recruited through health services, no other ethical approval was necessary.

2.3.2. Informed consent

The survey began with a participant information sheet (PIS) that provided key information about the study including the aims, what participation would involve, and matters of confidentiality and anonymity (see Appendix D). Participants were advised to print or save a copy of this for future reference. Contact details of the researcher and research supervisor were given, and participants were invited to get in touch with any questions. Participants were informed that they had the right to withdraw from the study at any point until they submitted their responses. Data could not be destroyed after this point as participant responses were anonymous and therefore could not be identified once submitted.

The PIS was followed by a consent form which featured several statements regarding participants' understanding of their rights (see Appendix E). Participants could not continue the survey without providing their consent. Following BPS guidance (2017b), participants were required to click on a "submit" button at the end of the survey to ensure their responses were recorded. Consent was thus considered at two junctures: via the electronic consent form and through submitting responses or not withdrawing incomplete responses.

2.3.3. Confidentiality

Participants were informed that their responses to the questionnaires were anonymous. To ensure anonymity, participants were allocated an identification number that was stored in the database where the survey responses were kept. Participants were invited to email the researcher if they were interested in being sent a summary of the results and/or being entered into the prize draw (see Section 2.8.3.). These details were saved in a separate database, (i.e., the online survey responses could not be matched to a particular participant). All information was stored on password-protected files, only accessible by the researcher and research supervisor. The email addresses were deleted once participants had been informed of the prize draw results and/or the summary of the study results. All other data will be kept in a password-protected file on the

researcher's computer and destroyed after three years in accordance with the Caldicott principle and Data Protection Act (1998, 2018).

2.3.4. Potential distress

This study was conducted online (see Section 2.8.). The cost-benefit of asking participants to engage with potentially distressing thoughts and feelings without face-to-face support was carefully considered. It was felt that the increased and widespread access to participants provided by the online format added to the scientific integrity of the research and would maximise recruitment potential. Participants would also be able to complete the survey at a convenient time and location for them. Furthermore, the reduced social pressure (Sproull & Kiesler, 1991) in online surveys makes it easier for participants to withdraw if they do feel distressed. This freedom is not inconsequential, considering the strong pressures to persevere in face-to-face studies (e.g., Milgram, 1963) and even telephone calls (Kraut et al., 2004). The measures have been used online in many studies (e.g., Freeman et al., 2005; Gaynor, 2016; Moritz, Van Quaquebeke, & Lincoln, 2012), and the efforts outlined below were put in place to minimise the risks related to this format.

Participants were made aware in the PIS that participation would involve recalling and answering questions about a time when they experienced shame during childhood or adolescence (a SM) via a secure online survey. They were also informed that they would be asked about current feelings of shame, compassion, PTEs and their associated distress. Participants were informed of the possible risks associated with this (e.g., making them more aware of potentially difficult experiences from the past and/or present that they may not have previously thought about). By providing this information, potential participants could make an informed choice as to whether taking part would be too distressing.

Participants were provided with a list of services that they could contact in the PIS and debrief sheet, if the study brought up distressing feelings that they wanted support with. This information was provided at the beginning and end of the survey in case participants withdrew from the study and were therefore unable to access the debrief page. They were also advised to save and/or print

the information to allow them to consult it at a later point if required. As with face-to-face contact, this relied on participants communicating that they felt distressed and making the decision to seek support.

2.3.5. Debriefing

Once participants had completed the questionnaires, they reached a comprehensive debrief sheet in which they were reminded about the purpose and aims of the study, researcher's contact details, information regarding the prize draw and/or requesting a summary of the results, and sources of support (see Appendix F).

2.4. Design

Based on the epistemological position and with the research questions in mind, a cross-sectional quantitative approach employing self-report questionnaires was adopted. The questionnaires were formatted to enable online completion. A quantitative approach was best suited to explore the relationships between the variables of interest. A cross-sectional design employing established self-report measures was chosen as the study aimed to replicate and extend the previous body of research exploring SMs, which has employed similar methods and materials. Section 2.6. describes the measures used and the decision-making processes involved.

To strengthen the design of the study by reducing fatigue and/or order effects, questionnaires were formatted to appear in a random order, with the exception of three (see Section 2.8.2.). To minimise missing data, participants could pause the survey and return to it. Given the online nature of the study, it was thought that participants may be reluctant to provide identifying information (e.g., name). To encourage participation and reduce social desirability bias, participants responses were therefore anonymous.

2.5. Participants

2.5.1. Inclusion criteria

The inclusion criteria aimed to be broad and inclusive in keeping with the continuum view of PTEs that informs this study. Adults aged over 18 were recruited as the study aimed to investigate the impact of SMs recalled from childhood or adolescence and to replicate and extend past research. Furthermore, as participants were not recruited from National Health Service (NHS) services where age restrictions apply, it was not appropriate to implement an upper age limit. As previous research in this area has excluded adults over 65 (typical cut-off for adult mental health services), there was limited literature on the relationship between these SMs and the experiences of interest in an older adult population. Therefore, this study allowed any differences relating to age to be explored.

As this study was not interested in solely studying "clinical" populations, the recruitment pool consisted of any individual with current or previous experience of PTEs, regardless of whether they had received a mental health diagnosis.

Consideration was given to recruiting participants worldwide due to the recruitment medium; however, after-care was a concern as it would not have been possible to provide a list of country-specific agencies that participants could contact if they felt distress due to the study. Participants therefore needed to be based in the UK. Participants also required a level of fluency in English to comprehend and respond to the information in the survey, as translated versions of the questionnaires were not available. Potential participants were informed of this in the PIS.

2.5.2. Recruitment

Opportunity sampling was employed to recruit the study sample. Online forums and social media sites were used to advertise the study (see Appendix G), alongside online support groups for individuals with PTEs (the specific groups are not named, to protect confidentiality). Details of the study were also posted in the HVN newsletter. The advertisement featured a brief overview of the study and a link to the electronic survey (see Appendix H).

2.6. Materials

All questionnaires used were reviewed by the researcher and research supervisor, with due consideration given to their psychometric properties, content and length (see Appendix I). Several questionnaires were selected as a result of their use in previous research on SMs/PTEs. Permission to use questionnaires that were not freely available was sought and granted.

2.6.1. Demographic and other information

Following the PIS and consent form, participants completed a demographic questionnaire in which age, gender and ethnicity were recorded, along with information regarding mental health diagnoses and support accessed (see Appendix J).

2.6.2. Priming for a shame memory

The Shame Experiences Interview (SEI; Matos & Pinto-Gouveia, 2006) is a semi-structured interview designed to measure the phenomenology of SMs. It assesses the emotional, behavioural, cognitive, motivational and contextual elements of shame, alongside the autobiographical, traumatic and centrality properties of SMs. The SEI begins with a description of the concept of shame, including external and internal shame. Three examples of SMs from childhood and adolescence are then provided.

In keeping with previous research (e.g., Pinto-Gouveia & Matos, 2011), this study utilised parts of the SEI. Firstly, it used amended versions of the three examples of shame experiences and the explanation of shame appropriate for online use that had been used previously (Gaynor, 2016), and approved by the lead author of the SEI (see Appendix K). Once participants were primed for the SM, they were asked to recall one significant shame experience from their childhood or adolescence that involved an attachment figure. As this study was informed by the secondary attachment literature, a definition of an attachment figure was provided (see Appendix J). Participants were then asked to answer the three self-report questionnaires used in the SEI, with that SM acting as an anchor for their responses. No Cronbach's alpha (α) has been reported for the SEI, however a description of the three questionnaires including reliability

considerations can be found in Section 2.6.3.

Participants were also asked to categorise the type of situation that best represented their SM and choose which attachment figure featured in it (see Appendix L). The descriptions within the SEI were originally designed to be used by an interviewer. As this study required participants to categorise the SM themselves, elaborated categories with examples were used, as done in a similar online study previously (Gaynor, 2016, [see Appendix M]).

To reduce participant burden and accommodate for data being collected online, participants were asked to recall only one SM.

2.6.3. Shame memory questionnaires

The following three questionnaires form part of the SEI (Matos & Pinto-Gouveia, 2006) described above. They have been used consistently in research that this study aimed to replicate and extend (e.g., Matos & Pinto-Gouveia, 2010, 2014).

2.6.3.1. The Autobiographical Memory Questionnaire (AMQ; Rubin, Burt, & Fifield, 2003; Rubin, Schrauf, & Greenberg, 2003; Sheen, Kemp, & Rubin, 2001) is sensitive to the conscious experience of remembering. It features a range of questions (which differ depending on the research aims) that measure a series of autobiographical memory properties of a certain event; in this case, participants' SMs. All items featured a seven-point scale and each item was considered individually. As the measure is not generally totalled, psychometric properties are not reported, and range and cut-off scores are not applicable. Items were excluded due to considerations concerning their face validity with regards to the research aims, and feedback from the pilot around the length of time the survey took to complete. The 11 items used in this study are shown in the Results chapter.

2.6.3.2. The Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997) is a 22-item questionnaire that assesses distress for a specific life event; in this case, participants' SMs. The items are rated on a five-point Likert scale, from zero (not at all) to four (extremely). It consists of three subscales that examine components considered central to traumatic memories: avoidance (e.g., "I tried

not to think about it"), intrusion (e.g., "I thought about it when I didn't mean to") and hyperarousal (e.g., "I felt watchful and on-guard"). The scale is an adaptation of the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979) and was developed as the IES did not measure hyperarousal.

Participants were asked to rate their distress over the past week, based on the SM they had recalled (see Appendix N). Higher scores indicate greater traumatic properties of the memory. Scores range from zero to 88 and there is no specific cut-off score. In keeping with previous SM research (e.g., Matos & Pinto-Gouveia, 2010) a total score was computed. The scale has shown good test-retest reliability (r = .89 to .94) and high internal consistency (Cronbach's α = .96; Pinto-Gouveia & Matos, 2011; Weiss & Marmar, 1997).

2.6.3.3. The Centrality of Event Scale-Short Version (CES-S; Berntsen & Rubin, 2006) consists of seven items rated on a five-point Likert scale, from one (totally disagree) to five (totally agree). It measures three interdependent features of a negative emotional event that load onto a single factor: the degree to which the event is perceived as a central component of one's identity (e.g., "This event has become a reference point for the way I understand myself and the world"), is seen as a turning point in one's life story (e.g., "This event permanently changed my life") and acts as a reference point for everyday inferences and attributions (e.g., "I often think about the effects this event will have on my future").

The long version of this scale (20 items) has been utilised in previous SM research (e.g., Pinto-Gouveia & Matos, 2011). In this study, participants were asked to answer the questionnaire based on the SM they had recalled, using the adjusted wording from Pinto-Gouveia and Matos (2011; Cronbach's α = .96 [see Appendix N]). Scores range from zero to 35 and no information exists regarding cut-off scores. Higher scores indicate greater centrality properties of the SM. In the validation study, Cronbach's α was .88.

2.6.4. Shame questionnaires

*2.6.4.1. The Other as Shamer Scale-2 (*OAS-2; Matos, Pinto-Gouveia, Gilbert, Duarte, & Figueiredo, 2015) was designed to assess external shame. It is

comprised of eight items from the original 18-item scale (Goss, Gilbert, & Allan, 1994). Participants rated the frequency of their feelings and experiences on items such as ‘‘I feel insecure about others opinions of me’’ on a five-point Likert scale from zero (never) to four (almost always). No referential time period was specified in the instructions. Scores range from zero to 32, with higher scores indicating greater external shame. No information on cut-off scores has been given for this measure.

This measure was chosen as it has been repeatedly employed to assess external shame (Mendes, Ferreira, & Marta-Simões, 2017; Saggino et al., 2017; Vagos, Ribeiro da Silva, Brazao, Rijo, & Gilbert, 2016; Xavier, Gouveia, & Cunha, 2016), and shown to be a reliable measure of external shame, with good internal consistency (Cronbach's $\alpha = .82$), concurrent and divergent validity (Matos et al., 2015).

2.6.4.2. The Social Comparison Scale (SCS; Allan & Gilbert, 1995) was designed to assess self-perceptions of social rank and relative social standing. In the current study it was used to measure levels of internal shame, as recommended by Matos and Pinto-Gouveia (2010). The ESS (Andrews et al., 2002) and the Internalized Shame Scale (ISS; Cook, 1994, 2001) were also considered, however these were not chosen due to previous criticisms regarding a lack of distinction between internal and external shame (Matos & Pinto-Gouveia, 2010), and cost implications, respectively.

Though the SCS was not designed specifically to measure internal shame, it taps into feelings of shame around how people perceive themselves in relation to others, through the use of a semantic differential methodology featuring 11 bipolar constructs. Participants rated themselves along a 10-point scale (e.g., "In relationship to others I feel": inferior - superior). No referential time period was specified in the instructions. Scores range from 11 to 110, with low scores indicating feelings of inferiority and low rank self-perceptions. No information regarding cut-off scores is available. The SCS has been used previously to assess levels of internal shame (Gaynor, 2016; McDonnell, 2017) and has shown high internal consistency in studies with participants who had received a mental health diagnosis (Cronbach's α = .90; Gilbert, Irons, Olsen, Gilbert, &

McEwan, 2005) and students (α = .89; Gilbert & Miles, 2000).

2.6.5. Compassion questionnaire

2.6.5.1. The Self-Compassion Scale (S-cS; Neff, 2003b) is a 26-item questionnaire that measures three aspects of positive self-compassion: self-kindness (e.g., “I’m kind to myself when I’m experiencing suffering”), common humanity (e.g., “I try to see my failings as part of the human condition”), and mindfulness (e.g., “When something painful happens I try to take a balanced view of the situation”), and three factors that focus on a lack of self-compassion: self-judgment (e.g., “When times are really difficult, I tend to be tough on myself”) isolation (e.g., “When I’m really struggling, I tend to feel like other people must be having an easier time of it”), and over-identification (e.g., “When I fail at something important to me I become consumed by feelings of inadequacy”).

Participants rate how often they engage in these ways of self-relating on a scale from one (almost never) to five (almost always). No referential time period was specified in the instructions. Responses to the lack of self-compassion subscales were reverse coded to calculate overall self-compassion scores. Higher scores indicate higher levels of self-compassion, and there is no information on cut-off scores. The S-cS was chosen as it is commonly used to measure self-compassion, making comparison with previous research possible. Cronbach’s α ranged from .75 to .81 in the validation study.

2.6.6. Psychotic-type experiences questionnaires

2.6.6.1. The Peters et al. Delusions Inventory (PDI; Peters et al., 1999) is a 21-item questionnaire that measures unusual beliefs or “delusions”. The multidimensional aspect of unusual beliefs was incorporated in the PDI by the addition of three dimensions to be rated for each item: distress, preoccupation, and conviction. If they answer “yes” to the statements, participants are instructed to rate a five-point Likert scale for each dimension. Four individual scores are then calculated: a yes/no score (total), and a distress, preoccupation, and conviction score. The total scores are calculated by assigning a one to each "yes" answer, a zero to each "no" answer and then totalling the 21 items. The possible range of scores is therefore zero to 21.

The PDI was chosen as it has been shown to have good internal consistency (Cronbach's α = .82) and validity (Peters et al., 1999). In the validation study, the correlations between the initial and subsequent PDI scores were calculated. Highly significant relationships were found for all scores (total: = 0.78, n = 83, p < 0.001; distress: r = 0.81, n = 74, p < 0.001; preoccupation: r = 0.81, n = 76, p < 0.001; conviction: r = 0.78, n = 70, p < 0.001). These significant relationships confirm the test-retest reliability of the PDI.

2.6.6.2. The Paranoia Checklist (PC; Freeman et al., 2005) is an 18-item questionnaire which measures the occurrence, frequency, conviction, and distress of paranoid thoughts. As with the PDI, four individual scores are calculated, and each dimension is rated on a five-point Likert scale. The PC was chosen as it provides a multi-dimensional assessment of paranoia, including the distress it causes. Furthermore, Cronbach's α for each of the dimensions was 0.9 or above in the validation study, indicating excellent internal reliability (Freeman et al., 2005).

2.6.6.3. The Cardiff Anomalous Perceptions Scale (CAPS; Bell, Halligan, & Ellis, 2006) is a 32-item scale that assesses unusual experiences or "perceptual anomalies". This was chosen as it covers a variety of unusual experiences, measures the distress, intrusiveness and frequency of them, and uses neutral language. Critically, it considers subjective experiences from a variety of perspectives (e.g., knowing that the percept is "not really there," the percept seeming strange or unusual, or the percept being a non-shared sensory experience; Bell et al., 2006).

As with the PDI and PC, participants are required to rate a five-point Likert scale for each dimension if they responded with a ''yes'' to the initial question. The possible range for the CAPS total is zero to 32, and zero to 160 for each of the subscales.

Internal reliability has been found to be good (Cronbach's α = .87). Test-retest reliability was also found to be acceptable for all CAPS dimensions: total: r = 0.77, p < .0005; distress: r = 0.779, p < .0005; intrusiveness: r = 0.783, p < .0005; frequency: = r = 0.778, p < .0005. The standard error (SE) of

measurement for the CAPS total score was thus calculated as 1.34, demonstrating a low margin of error when measuring the hypothetical true score. The Cronbach's α of the test-retest sample was .92, showing that internal reliability remained stable over time (Bell et al., 2006).

2.6.7. Applications and programmes

Qualtrics (2018) is a subscription software that allowed the researcher to create and publish the online survey, collect responses securely, and export the final data to other applications for data analysis.

Statistical Package for the Social Sciences version 24.0 (SPSS; IBM Corp., 2016) is the analytics software utilised to analyse the data in this study.

Random.org (2019) is a smart phone application that was utilised to select the winning participants (see Section 2.8.3.).

2.7. Pilot phase

The pilot phase of the survey involved ten participants from the researcher's social network (eight females and two males), ranging in age from 21 to 80 years-old. Four participants had experienced mental health difficulties, four had not and two did not specify. Nine of the pilot sample were White British, and one was Arab. Participants were asked to provide comments on their experience of participation and highlight anything that felt unclear. As the online survey format was new to the researcher, the pilot focused on detecting any noticeable glitches with progression through the survey, alongside grammatical or formatting problems.

Amendments were made to the presentation of the questions and response options based on participant feedback. An important change stemmed from a comment that the three names in the example SM situations were all White, Western-sounding names. Permission was thus sought from the author to change two of these names (see Appendix J). Feedback also raised concerns regarding whether it would be clear to participants that they were required to complete the questionnaires with only one SM in mind. The instructions were

therefore amended to emphasise this.

The pilot phase was also used to gauge how long the survey took to complete. It took participants approximately 20-40 minutes to complete. Some participants (*n* = 5) remarked on this, raising concerns around the length of time putting potential participants off. This led to the decision to use the shorter versions of two questionnaires. Furthermore, a progress bar was added to allow participants to gauge their progress.

2.8. Procedure

2.8.1. Informed consent

As detailed in Section 2.3.2., once participants had followed the study URL, they reached the PIS and consent form. Participants could not proceed beyond the consent page without providing their consent.

2.8.2. Data collection

Once consent was given, participants were asked to provide demographic information. Participants were then provided with an introduction to the concept of shame and attachment figures, followed by an instruction to recall one SM (see Section 2.6.2.). Subsequently, participants were requested to complete the IES-R, CES-S, and AMQ (see Section 2.6.3.). The rationale for these needing to be completed before the other questionnaires was to enable participants to have a concrete memory in mind which would serve as a basis for answering these questionnaires. The remaining questionnaires were presented in random order.

2.8.3. Following participation

Once participants had completed all the questionnaires, they reached the debrief sheet. Due to the time-consuming nature of participation, participants were given the option of entering a prize draw to win a £25 voucher. To increase the chance of winning, four winners will be randomly selected to each win a £25 “Love2Shop” voucher. Love2Shop vouchers were chosen as UEL has access to these and the researcher felt that they provided participants with a range of options.

Participants were informed that they could email the researcher if they were interested in being sent a summary of the results and/or entering the prize draw. All participants who chose to enter the prize draw (26% of the sample) were allocated a corresponding number. The researcher, witnessed by the research supervisor, used a random number generator to select the winning participants. The voucher was then sent to the winners on the contact details provided. All participants who had expressed interest were sent a summary of the study findings (see Appendix O).

2.9. Analytic strategy and sample size considerations

Descriptive statistics were computed for the demographic information collected and all measures. Correlational analyses were performed to examine the relationships between the variables. To answer question two onwards, multiple regression analyses (MRs) and moderation analyses were conducted. A macro was added for the moderation analyses (Hayes, 2012; IBM, 2016). According to the rule of thumb of at least 10 cases per variable (Harrell, 2001; Harris, 1985; Nunnally, 1967; Peduzzi, Concato, Feinsten, & Holford, 1995; Peduzzi, Concato, Kemper, Holford, & Feinsten, 1996), the current study had 15 more cases than the required 20, when two predictor variables were used.

3. RESULTS

3.1. Overview

This chapter will begin with a description of the sample characteristics, followed by a discussion around the management of missing data. Demographic information and data screening procedures will then be outlined. Lastly, the details of the statistical analyses and research findings relating to each research question will be reported.

3.2. Sample characteristics

3.2.1. “Completers” and “non-completers”

One hundred and fifty-three participants accessed the online survey. Twenty-six participants (17.0%) did not provide consent, whilst eight participants (5.2%) provided consent to take part but did not complete any demographic information or questionnaire measures. Forty-nine participants (32.0%) completed some demographic information but did not complete any questionnaire measures, and 35 participants (22.9%) completed between one and eight questionnaires (10 questionnaires in total). Demographic information was thus available for 84 “non-completers” (54.9%). Thirty-five participants (22.9%) completed all the questionnaire measures. “Completers” (n = 35) were then compared to “non-completers” (n = 84) to reduce the likelihood of biased interpretations.

- 94.3% of completers selected “White” ethnic backgrounds compared with 91.7% of non-completers.
- 48.6% of completers were male compared with 51.2% of non-completers.
- The mean age for both completers and non-completers was 30 years.
- The median age for both completers and non-completers was 27 years.
- A higher number of non-completers stated that they had received a mental health diagnosis (61.9% of non-completers compared with 54.6% of completers). However, there was not a significant difference between participants having a mental health diagnosis and the survey being completed ($\chi^2(1) = .592$, $p = .442$, phi = .07).

3.2.2. Demographic information

Table 1 features the characteristics of the 35 participants who completed the study. There was a comparable number of female and male participants (45.7% and 48.6% respectively), and the majority (71.4%) identified as being White British. Table 2 displays information regarding participants’ experience of mental health difficulties, showing that there was a comparable number of participants who had received a mental health diagnosis (54.3%) and those who had not (45.7%).

The participants reported a broad range of mental health diagnoses that could be grouped under mood, anxiety, psychotic and personality “disorders”. The most commonly reported diagnoses were depression (43%) and anxiety (40%), followed by “psychotic disorders “(22.9%). Within the “other” category (5.7%), participants reported autism/Asperger syndrome and anorexia nervosa. Most participants reported that they had been experiencing mental health difficulties for over 10 years, however 25.7% of participants did not respond to that question. There was a comparable proportion of participants who were currently accessing support (37%), had in the past (34%), and had never accessed support (29%).

Table 1. Demographic information

Characteristic	***N***	**%**
Age (in years)		
M* = 30 *SD* = *8.92		
18-24	11	31.4
25-29	11	31.4
30-34	3	8.6
35-39	2	5.7
40-44	5	14.3
45-49	3	8.6
Gender		
Female	16	45.7
Male	17	48.6
Other	2	5.7
Ethnic origin		
White- English/Welsh/Scottish/Northern Irish	25	71.4
White Irish	5	14.3
Any other White background	3	8.6
Pakistani	1	2.9
Any other Asian background	1	2.9

Table 2. Experience of mental health difficulties

Experience	N	%
Mental health diagnosis		
Yes	19	54.3
No	16	45.7
Self-reported mental health difficulties		
Yes	8	22.9
No	8	22.9
Not specified	19	54.3
Diagnosis/diagnoses received or self-reported description of mental health difficulty/difficulties		
Depression	15	42.9
Anxiety (including Obsessive Compulsive Disorder, phobias, PTSD)	14	40.0
Psychosis	3	8.6
Schizophrenia	1	2.9
Bipolar	4	11.4
Personality Disorder	2	5.7
Other	5	14.3
** Counts will not sum to 35 as participants could tick more than one category		
Received diagnosis/mental health difficulties started		
6-12 months ago	5	14.3
2-4 years ago	2	5.7
4-6 years ago	2	5.7
6-8 years ago	1	2.9
8-10 years ago	6	17.1
>10 years ago	10	28.6
Not specified	9	25.7
Currently accessing professional support/accessed in the past (i.e. talking therapy and/or medication)		
Yes currently	13	37.1
Yes in the past	12	34.3
No	10	28.6

3.3. Missing data

Data were assessed to establish if missing data were missing completely at random (MCAR), missing at random (MAR), or missing as a result of systematic error in data collection (Rubin, 1987; Sinharay, Stern, & Russell, 2001). Little's (1988) Chi-Square analysis of missing values was conducted and supported the null hypothesis, that data were MCAR, $X^2 = 2582.77$, $df = 9546$, $p = 1.00$.

There are a variety of methods to handle missing data, each with their own limitations. The approach taken in this study is based on the amount of missing data (Dong & Peng, 2013; Schafer, 1999) as well as the relatively small sample size (Hardt, Herke, Brian, & Laubach, 2013).

Single imputation (SI) methods replace missing values by a value defined by a certain rule (Dziura, Post, Zhao, Fu, & Peduzzi, 2013). Whilst in datasets with minimal proportions of missing data, (e.g., less than 5%; Schafer, 1999), these methods may perform adequately (Bono, Ried, Kimberlin, & Vogel, 2007), in datasets with large amounts of missing data (e.g., 25% or higher; Widaman, 2006), SI can distort distributions and relationships, bias regression coefficients, and underestimate the variances (e.g., Donders, Van Der Heijden, Stijnen, & Moons, 2006; Sterne et al., 2009), thus demonstrating more apparent power than in reality (Kang, 2013).

One example of SI is mean substitution. This method was considered, however as the variability in data is reduced, the standard deviations and variance estimates tend to be underestimated, particularly with small samples (Malhotra, 1987). Definitions of "small" in this context vary, however it has been defined by some as below 50 (e.g., Barnes, Lindborg, & Seaman, 2006; McNeish, 2016). Expectation-Maximization (EM) and Maximum Likelihood (ML) were also considered, however EM requires a large sample size (Allison, 2012) and both EM and ML are not recommended when there are small samples or large amounts of missing data as they can lead to biased parameter estimates and underestimate the SE (Kang, 2013; Kariuki, Gichuhi, & Wanjoya, 2015).

Multiple imputation (MI) has many advantages, as a large amount of data is retained and the standard deviation (SD) or shape of the distribution is not altered (Schafer & Graham, 2002). However, when a sizeable amount of data is missing, a large amount of random variance can occur, which can result in severe misinterpretations of the data. Furthermore, Hardt and colleagues (2013) advise against substituting more than around 20% of missing data, particularly in small samples. Due to the amount of missing data in this study, these methods would have resulted in the substitution of a considerable amount of data.

Listwise deletion (LD) was therefore considered the most appropriate method for handling missing data in this study. This involved the removal of all data for cases with one or more missing values (Enders, 2010). Whilst this method has been critiqued (Graham, 2009), it remains the most commonly used technique in many areas of research (Eekhout, de Boer, Twisk, de Vet, & Heymans, 2012; Piggot, 2001), and if the assumption of MCAR is satisfied, it can produce unbiased estimates and conservative results (Kang, 2013; Sterne et al., 2009). Furthermore, in an examination of missing data handling methods, Cheema (2014) demonstrated that when multiple regression (MR) was the method of analysis, sample size was small, and there was a large proportion of missing data, the gain in accuracy between MI and LD was only around 1%. Indeed, LD frequently worked better than some imputation methods in such cases (Cheema, 2014). The researcher therefore decided to rely on the complete data collected rather than using a considerable number of estimated figures calculated for scores from a small sample. Moreover, the cases that were removed were missing data from every item on at least two variables, making imputation methods unfeasible (Tabachnick & Fidell, 2007).

3.4. Data distribution

3.4.1. Reliability of measures

Cronbach's alpha (α) was used to examine the internal consistency of each measure for the current sample. A high level of internal consistency was found for all measures, with a range of .91 to .98; indicating reliability (see Appendix P).

3.4.2. Univariate outliers

Univariate outliers can be detected by converting the values for each variable to z-scores, with values greater than 3.29 ($p < .001$) regarded as outliers (Tabachnick & Fidell, 2013). This process revealed one significant outlier on the SCS. There is considerable debate regarding the treatment of outliers (e.g., Cousineau & Chartier, 2010; Leys, Ley, Klein, Bernard, & Licata, 2013). This study followed Field's (2009) recommendation of keeping outliers if they reflect genuine scores from the population of interest as opposed to data entry errors. Moreover, this study was interested in the full spectrum of experiences reported by participants. Running correlations without the outlier demonstrated slightly increased and decreased *r* values and additional significant associations (see Appendix Q). However, the outlier did not impact on the significance of any of the statistical analyses. The outlier was thus kept in the data set, as it was considered an "interesting" outlier rather than an error outlier (Aguinis, Gottfredson, & Joo, 2015).

3.4.3. Parametric assumptions

The assumptions of normality must be met to run parametric tests, as statistical findings may be inaccurate if these are violated. Exploratory data analysis was thus conducted. Table 4 displays the mean, SD, skewness (SK), kurtosis (Rku) and standard errors (SEs) for each variable (Tabachnick & Fidell, 2007). Field (2009) states that the skewness and kurtosis values need to be standardised by converting them into z-scores. Following Field's (2009) criteria for small samples, a z-score that is greater than 2.58 is significant at $p < 0.1$, indicating skewness and kurtosis on the SCS Total, CAPS and PDI Totals and subscales.

The Shapiro-Wilk (S-W) test was run to compare the mean and SD of scores to normally distributed scores (Thode, 2002). Skewness and kurtosis values of zero indicate that a variable is normally distributed, whilst a non-significant finding ($p > .05$) in the S-W test suggests that the sample is not significantly different from a normal population (Field, 2009). These analyses were also run on the dataset without the outlier. The scores were found to be similar and the outlier did not make a difference to the outcome.

Curran, West and Finch's (1996) thresholds for SK (between -2 to 2) and Rku (between -7 and 7) suggested that only the PDI Preoccupation subscale deviated from normal. However, Bulmer's (2003) more stringent criteria indicated that:

- the SCS, CAPS and PDI Totals and subscales were highly skewed (< -1 or > 1)
- the IES-R and PC Total and subscales were moderately skewed (between -1 and -.5 or between .5 and 1)
- the CES-S, S-cS and OAS-2 were approximately symmetric (between -.5 and .5)

This is comparable with the results from the S-W test, which indicated that all variables apart from the CES-S, OAS-2, PC Frequency subscale and S-cS were significantly different from a normal distribution. The variables' frequency Histograms and Q-Q Plots were also evaluated (see Appendix R).

Table 3. Exploratory data analysis

Variable	M	SD	SK	SE SK	Z SK	Rku	SE Rku	Z Rku	S-W
IES-R	44.86	19.46	.65	0.398	1.63	-.63	0.778	0.81	.013*
CES-S	22.14	7.93	-.04	0.398	-0.10	-.98	0.778	-1.26	.357
AMQ items									
Reliving	3.57	1.80	.21	0.398	0.53	-.89	0.778	-1.14	.020*
Hear	3.51	2.09	.25	0.398	0.63	-1.3	0.778	-1.67	.002*
See	4.43	1.93	-.55	0.398	-1.38	-.81	0.778	-1.04	.003*
Talk	3.26	2.36	.35	0.398	0.88	-1.7	0.778	-2.19	.000*
Emotion	4.37	2.10	-.12	0.398	-0.30	-1.5	0.778	-1.93	.002*
Setting	5.40	1.82	-1.1	0.398	-2.76	.41	0.778	0.53	.000*
Remember/know	5.51	1.85	-1.0	0.398	-2.51	-.01	0.778	-0.01	.000*
In words	3.57	1.91	.18	0.398	0.45	-1.2	0.778	-1.54	.012*
Subject	4.09	2.33	-.05	0.398	-0.13	-1.5	0.778	-1.93	.001*
Story	4.20	2.32	-.27	0.398	-0.68	-1.6	0.778	-2.06	.000*
Message/anchor	4.54	1.93	-.52	0.398	-1.31	-.54	0.778	-0.69	.004*
OAS-2	27.34	8.97	-.40	0.398	-1.01	-.93	0.778	-1.20	.068
SCS	43.94	17.69	1.5	0.398	3.77	4.46	0.778	5.73	.002*
CAPS Total	10.49	8.54	1.5	0.398	3.77	1.68	0.778	2.16	.000*
CAPS Distress	34.69	38.32	2.0	0.398	5.03	3.38	0.778	4.34	.000*
CAPS Intrusiveness	39.23	39.41	1.7	0.398	4.27	2.33	0.778	2.99	.000*
CAPS Frequency	32.17	37.11	2.0	0.398	5.03	3.58	0.778	4.60	.000*
PDI Total	6.86	5.41	1.3	0.398	3.27	1.46	0.778	1.88	.001*
PDI Distress	24.86	24.95	1.9	0.398	4.77	3.66	0.778	4.70	.000*
PDI Preoccupation	23.03	24.49	2.1	0.398	5.28	4.07	0.778	5.23	.000*
PDI Conviction	23.03	22.90	2.0	0.398	5.03	3.92	0.778	5.04	.000*
PC Total	128.26	56.24	.54	0.398	1.36	-.76	0.778	-0.98	.030*
PC Frequency	45.06	18.74	.39	0.398	0.98	-.87	0.778	-1.12	.078
PC Conviction	42.77	19.46	.57	0.398	1.43	-.77	0.778	-0.99	.023*
PC Distress	41.71	20.15	.58	0.398	1.46	-.86	0.778	-1.11	.007*
S-cS	2.52	.730	.20	0.398	0.50	-.10	0.778	-0.12	.936

* significant at $p < .05$

3.4.4. Likert scales

There has been considerable debate regarding whether Likert-type responses should be treated as interval or ordinal data. Many authors have demonstrated that Likert scales can be analysed effectively as interval scales (e.g., Baggaley & Hull, 1983; Carifio & Perla, 2007, 2008; Maurer & Pierce, 1998; Vickers, 1999). An important distinction must be made however between the individual items in a scale, and the summation of a series of items (e.g., Bishop & Herron, 2015), as was done for each variable. Most researchers stipulate that these summations demonstrate reliability, which all the variables did. Allen and Seaman (1997) support Likert scales being treated as interval data providing:

- the scale item has a minimum of five categories
- the Likert items may be combined to form indexes
- these indexes form an underlying characteristic or variable

These conditions were all met within this study.

3.4.5. Summary

These analyses generated ambiguous results. However, the prevalence of normality within real-world distributions has been questioned by several authors (e.g., Bruce, 2018; Dudley-Marling & Gurn, 2010; Geary, 1947; Micceri, 1989; Pearson, 1895). Given the mixed clinical/non-clinical sample in this study, it could be argued that a normal distribution would not be expected for some variables such as the distress related to PTEs. Indeed, Johns and van Os (2001) commented on the difference between normally distributed measures and the left-skewed ‘‘half-normal’’ distribution of measures of PTEs, arguing that such a distribution is likely to reflect the ‘’real’’ distribution of PTEs. This indicates that the left-skewed distribution of the CAPS and PDI Totals and subscales may accurately reflect the proposed continuum of PTEs.

The robustness of parametric tests was contemplated to ascertain the possible impact of non-normal distributions in this study. Although agreement on this has not yet been reached, many researchers argue that parametric tests are robust enough to withstand violations of the normality assumption (Rasch & Guiard, 2004; Tabachnick & Fidell, 2012). Pallant (2007) advises that with large enough

samples (> 30), non-normality should not generate issues, indicating that parametric tests may be used even if the data are non-normally distributed (Elliot & Woodward, 2007). Wilcox (2005, 2010) proposes that with skewed variables and fat-tailed distributions (e.g., CAPS and PDI subscales) efforts should be made to transform skewed variables. Logarithmic and square root transformations were conducted on the skewed variables. Whilst this improved some variables, it made little difference to the distribution of most (see Appendix S).

This study aimed to take particular care to minimise any impact of bias. Transformation of all variables was considered but not conducted as this frequently does not rectify non-normal data (Glass, Peckham, & Saunders, 1972; Wright & Field, 2009), and can cause problems when interpreting results (Feng, Wang, Lu, Chen, He, et al., 2014). The use of non-parametric tests was also contemplated. These were not opted for however, as they are considered less sensitive and efficient compared to parametric tests (Bluman, 2011).

To strengthen robustness and mitigate against the impact of skewed variables, bootstrapping procedures were implemented across all analyses (DiCiccio & Efron, 1996; Field; 2009; Salibian-Barrera & Zamar, 2002). These were based on 1000 bootstrap samples and 95% bias-corrected and accelerated (BCa) confidence intervals (CIs).

3.5. Research question 1: What are the characteristics of shame memories?

The type of shame situation that featured in the SMs is detailed in Table 4. Participants most frequently chose "*criticism by an attachment figure*" (31.4%), followed by *"emotional/psychological abuse"* (25.7%). The most common attachment figure to feature in the SMs was a parent (48.6%; see Figure 1). Participants who selected "other" referred to stepfather, peers and extended family. The traumatic (IES-R), centrality (CES-S) and autobiographical memory (AMQ) properties of participants' SMs are shown in Table 5. To contextualise the findings within the research base, they will be compared with previous findings in the discussion (see Section 4.4).

Table 4. Type of shame memory situation

Type of shame situation	***N***	**% of sample**
Criticism by an attachment figure	11	31.4
Exposure of perceived negative personal attributes, characteristics, behaviour to others	3	8.6
Negative comments about the body, weight, bodily shape or physical appearance	5	14.3
Comparisons with significant others	2	5.7
Physical abuse	1	2.9
Shame of personal habits	0	0
Sexual abuse	2	5.7
Emotional/psychological abuse	9	25.7
Reflected shame	0	0
Shame of family status	2	5.7

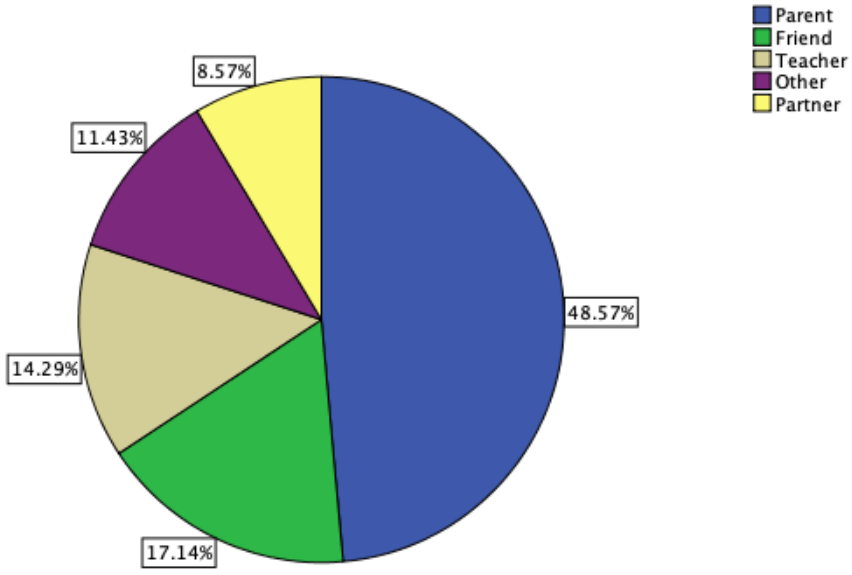


Figure 1. Pie graph of attachment figures featured in the SMs

3.6. Bivariate correlations

Table 5 shows the Pearson's correlation coefficients (*r*), which demonstrated the significance of the relationships between the variables, and the CIs obtained through bootstrapping. As significant associations were found between the vast majority of variables, the strength of statistical significance, direction of the relationship, and effect sizes are more meaningful than the existence or absence of statistical significance. The exceptions were self-compassion (S-cS) and internal shame (SCS), which were only significantly correlated with each other.

Table 5. Bivariate correlations between the variables

Variables	IES-R	CES	OAS	SCS	CAPS_T	CAPS_D	CAPS_I	CAPS_F	PDI_T	PDI_D	PDI_P	PDI_C	PC_T	PC_F	PC_C	PC_D	S-cS
IES-R	1																
CES-S	.55**	1															
CI	.28 - .73																
OAS	.58**	.43**	1														
CI	.34 - .73	.11 - .65															
SCS	-.02	-.23	-.33	1													
CI	-.58 - .42	-.62 - .09	-.74 - .01														
CAPS_T	.64**	.56**	.51**	-.10	1												
CI	.38 - .81	.37 - .75	.31 - .68	-.71 - .40													
CAPS_D	.66**	.54**	.47**	.02	.97**	1											
CI	.40 - .83	.30 - .72	.25 - .65	-.67 - .53	.94 - .98												
CAPS_I	.64**	.54*	.47**	.02	.98**	.99**	1										
CI	.35 - .82	.30 - .72	.24 - .65	-.69 - .49	.97 - .99	.98 - 1.0											
CAPS_F	.71**	.55**	.47**	.04	.96**	.98**	.98**	1									
CI	.49 - .86	.33 - .72	.26 - .64	-.67 - .56	.92 - .98	.95 - .99	.93 - .99										
PDI_T	.61**	.60**	.52**	-.06	.82**	.82**	.81**	.82**	1								
CI	.31 - .80	.42 - .75	.32 - .69	-.68 - .45	.65 - .92	.64 - .91	.61 - .91	.62 - .92									

Variables	IES-R	CES	OAS	SCS	CAPS_T	CAPS_D	CAPS_I	CAPS_F	PDI_T	PDI_D	PDI_P	PDI_C	PC_T	PC_F	PC_C	PC_D	S-cS
PDI_D	.68**	.57**	.51**	-.01	.88**	.91**	.90**	.91**	.94**	1							
CI	.43 - .84	.40 - .72	.29 - .67	-.69 - .53	.77 - .94	.81 - .96	.79 - .96	.79 - .96	.86 - .98								
PDI_P	.71**	.58**	.49**	.01	.89**	.92**	.91**	.94**	.94**	.99**	1						
CI	.48 - .86	.38 - .72	.30 - .65	-.67 - .55	.79 - .94	.83 - .97	.80 - .96	.84 - .97	.84 - .98	.97 - .99							
PDI_C	.69**	.54**	.52**	.02	.86**	.88**	.86**	.90**	.96**	.98**	.99**	1					
CI	.46 - .84	.34 - .68	.33 - .69	-.71 - .53	.73 - .93	.75 - .95	.72 - .94	.77 - .96	.86 - .99	.95 - .99	.97 - .99						
PC_T	.58**	.53**	.75**	-.17	.72**	.73**	.72**	.72**	.71**	.77**	.75**	.76**	1				
CI	.29 - .77	.22 - .72	.57 - .87	-.71 - .28	-.71 - .28	.50 - .86	.49 - .85	.48 - .85	.49 - .84	.58 - .88	.57 - .86	.60 - .86					
PC_F	.58**	.59**	.74**	-.22	.76**	.74**	.75**	.74**	.71**	.75**	.73**	.74**	.92**	1			
CI	.25 - .80	.31 - .78	.58 - .86	-.70 - .17	.55 - .87	.52 - .87	.53 - .87	.52 - .86	.50 - .85	.61 - .87	.56 - .86	.55 - .87	.82 - .98				
PC_C	.59**	.52**	.69**	-.12	.71**	.72**	.71**	.71**	.72**	.77**	.76**	.76**	.97**	.88**	1		
CI	.20 - .82	.22 - .73	.47 - .84	-.64 - .29	.44 - .87	.46 - .88	.43 - .88	.41 - .89	.48 - .87	.59 - .89	.57 - .88	.58 - .89	.93 - .99	.72 - .97			
PC_D	.55**	.49**	.68**	-.17	.68**	.70**	.69**	.68**	.66**	.75**	.74**	.74**	.96**	.83**	.94**	1	
CI	.12 - .83	.15 - .72	.43 - .84	-.67 - .23	-.38 - .86	.44 - .87	.41 - .86	.37 - .86	.38 - .85	.56 - .88	.52 - .88	.52 - .88	.92 - .98	.62 - .94	.86 - .98		
S-cS	-1.3	-.11	-.30	.52**	-.12	-.07	-.10	-.04	-.09	-.14	-.11	-.10	-.24	-.17	-.22	-.28	1
CI	-.44 - 1.7	-.47 - 0.3	-.54 - -.02	.28 - .73	-.45 - .20	-.43 - .24	-.45 - .22	-.42 - .27	-.46 - .26	-.51 - .19	-.50 - .22	-.51 - .24	-.53 - .07	-.48 - .15	-.52 - .12	-.57 - .03	

** Correlation significant at the 0.01 level. * Correlation significant at the 0.05 level.

Note. IES-R = Impact of event, CES-S= Centrality event, CAPS_T = Cardiff Anomalous Experiences Total, CAPS_D = Distress subscale, CAPS_I = Intrusiveness subscale, CAPS_F = Frequency subscale, PDI_T = Peters et al Delusions Inventory Total, PDI_D= Distress subscale, PDI_P = Preoccupation Subscale, PDI_C = Conviction subscale, PC = Paranoia Checklist, PC_F= Frequency subscale, PC_C= Conviction subscale, PC_D= Distress subscale, PC_T= S-cS = Self-compassion Scale

3.7. Research question 2: Do the traumatic and centrality properties of SMs predict:
a) internal shame
b) external shame

Two multiple regressions (MRs) were performed, both with IES-R (traumatic properties of SMs) and CES-S (centrality properties of SMs) as predictor variables (see Appendix T). One was conducted with SCS (internal shame) as the outcome variable and the second was conducted with OAS-2 (external shame) as the outcome variable.

3.7.1. Assumptions

MRs depend on several assumptions being met (Field, 2009). To confirm that these assumptions were met for both MRs, a number of issues were considered.

3.7.1.1. Ratio of cases to predictor variables

Following the rule of thumb of at least 10 cases per predictor variable (e.g., Harrell, 2001; Peduzzi et al., 1995, 1996), this study had 15 more cases than the required 20, when two predictor variables were used. This was the case for all analyses conducted.

3.7.1.2. Homoscedasticity, independent and normally distributed errors

The assumptions of linearity and homoscedasticity were met as graph plots of the standardised residuals and predicted values demonstrated that the majority of residuals were evenly distributed and fell between -2 and 2 (Cohen & Cohen, 1983, Pedhazur, 1997; Tabachnick & Fidell, 2012; see Appendix U), except for the univariate outlier considered and retained in Section 3.4.2 (Cohen, Cohen, West, & Aiken, 2003; Pedhazur, 1997). The Durbin-Watson (1951) scores (1.5 - 2.4) were close to 2 (the ideal value), indicating that the data met the assumption of independent errors.

3.7.1.3. Multicollinearity

Tolerance and Variance Inflation Factor (VIF) scores were examined to assess multicollinearity. Field (2009) advises that a tolerance value < 0.1 suggests multicollinearity. Bowerman and O'Connell (1990) hold that if the average VIF is > 1 then multicollinearity may be present, yet others argue a VIF of < 10 is insignificant (Hair, Anderson, Tatham, & Black, 1998). The tolerance and VIF scores were .70 and 1.4 respectively. Multicollinearity was therefore not considered a problem as the VIF scores were < 10 and the tolerances were > 0.1.

3.7.1.4. Outliers and influential cases

Mahalanobis (1936) distances were checked and no scores exceeded the critical value of 11 using the Barnett and Lewis (1978) guidelines. Field (2009) advises that no more than 5% of cases should have standardised residuals > 2. This analysis revealed one case that was > 2 (2.9%), thus meeting Field's (2009) recommendation. With regards to influences, Field (2009) recommends examining the standardised DFBeta statistics for values > 1. Only one was found and Cook's distance (Cook & Weisberg, 1982) indicated that only one case was > 1 (1.3).

3.7.2. Regression models

Table 6 contains the standardised regression coefficients (β), bootstrapped significance values (*p*), bias, CIs and SEs for the first regression model. The predictor variables did not produce a significant model, R^2 = .068; $F(2, 32)$ = 1.160; p = .326 and neither the traumatic or centrality properties of SMs significantly predicted internal shame.

Table 6. Bootstrapped multiple regression analysis

Variable	***p***	**β**	**Bias**	**95% CI**	**SE beta**
IES-R	.65	.14	-.02	-.37 - .66	.29
CES-S	.13	-.69	.01	-1.6 - .13	.43

Table 7 features the standardised regression coefficients (β), bootstrapped significance values (*p*), bias, CIs and SEs for the second regression model. The predictor variables produced a significant model, R^2 = .354; $F(2, 32) = 8.750$; p = .001, accounting for 35.4% of the variance in external shame. Only the traumatic properties of SMs significantly and independently predicted external shame (β = .49; p = .008).

Table 7. Bootstrapped multiple regression analysis

Variable	*p*	β	Bias	95% CI	SE beta
IES-R	.00	.49	.00	.07 - .39	.08
CES-S	.34	.16	-.01	-.21 - .56	.20

3.8. Research question 3a: Do the properties of shame memories (centrality and traumatic) predict the distress associated with:

a) **unusual experiences**
b) **unusual beliefs**
c) **paranoia**

Three MRs were performed with CES-S (centrality properties of SMs) and IES-R (traumatic properties of SMs) as the predictor variables. One was conducted with CAPS_D (distress associated with unusual experiences) as the outcome variable, the second with PDI_D (distress associated with unusual beliefs), and the third with PC_D (distress associated with paranoia) as the outcome variable (see Appendix T).

3.8.1. Assumptions

The same assumptions were examined and are summarised below.

3.8.1.1. Homoscedasticity, independent and normally distributed errors

The assumptions of linearity and homoscedasticity were met as graph plots of the standardised residuals and predicted values demonstrated that the majority of residuals were evenly distributed and fell between -2 and 2 (see Appendix U). The Durbin-Watson statistics were close to the ideal value of 2 (1.3 - 2.1).

3.8.1.2. Multicollinearity

Multicollinearity was not considered an issue as all VIF values were < 10 and the tolerance values were > 0.1 (Field, 2009).

3.8.1.3. Outliers and influential cases

No cases had a Mahalanobis (1936) distance score > 11. One case (2.9%) was found to have a standardised residual > 2, thus meeting Field's (2009) recommendation. One standardised DFBeta was > 1 (1.3), however Cook's distance indicated that no cases were > 1, suggesting that no cases had a large influence on the model (Field, 2009).

3.8.2. Multiple regression models: findings

3.8.2.1. Unusual experiences

Table 8 contains the standardised regression coefficients (β), bootstrapped significance values (*p*), bias, CIs and SEs for the MR. The traumatic and centrality properties of SMs produced a significant model as predictors of the distress associated with unusual experiences, R^2 = .481; $F(2, 32) = 14.836$; $p < .001$, accounting for 48.1% of the variance. Only the traumatic properties of SMs significantly and independently predicted the distress caused by unusual experiences (β = .526; *p* = .040).

Table 8. Bootstrapped multiple regression analysis

Variable	*p*	β	Bias	95% CI	SE beta
IES-R	.04	.53	-.00	.27 - 1.8	.41
CES-S	.13	.25	-.02	-.42 - 2.6	.76

3.8.2.2. Unusual beliefs

Table 9 shows the standardised regression coefficients (β), bootstrapped significance values (*p*), bias, CIs and SEs for the MR. The traumatic and centrality properties of SMs produced a significant model as predictors of the distress associated with unusual beliefs, R^2 = .527; $F(2, 32) = 17.791$; $p < .001$, accounting for 52.7% of the variance. Both the traumatic (β =.516; $p = .037$) and centrality (β = .302; $p = .017$) properties of SMs significantly and independently predicted the distress caused by unusual beliefs.

Table 9. Bootstrapped multiple regression analysis

Variable	*p*	β	Bias	95% CI	SE beta
IES-R	.04	.52	-.02	.22 - 1.1	.25
CES-S	.02	.30	-.02	.20 - 1.6	.38

3.8.2.3. Paranoia

Table 10 features the standardised regression coefficients (β), bootstrapped significance values (*p*), bias, CIs and SEs for the MR. The traumatic and centrality properties of SMs produced a significant model as predictors of the distress associated with paranoia, R^2 = .351; $F(2, 32) = 8.656$; $p = .001$, accounting for 35.1% of the variance. Only the traumatic properties of SMs were found to significantly and independently predict the distress associated with paranoia (β = .401; $p = .031$).

Table 10. Bootstrapped multiple regression analysis

Variable	*p*	β	Bias	95% CI	SE beta
IES-R	.03	.40	-.00	-.01 - .75	.18
CES-S	.09	.2	-.03	-.01 – 1.3	.37

3.9. Research question 3b: Does shame (internal and external) act as a moderator for these relationships?

Based on the evidence base surrounding the impact of shame on PTEs, eight moderation analyses were conducted to examine whether shame had a moderating effect on the significant relationships found between the traumatic and centrality properties of SMs, and the distress associated with PTEs (Hayes, 2012). Two out of the eight moderation analyses were significant. Information regarding the non-significant moderation analyses can be found in Appendix W, and SPSS output in Appendix X.

3.9.1. Does internal shame moderate the relationship between traumatic SM and CAPS distress?

A moderation analysis was performed to investigate whether internal shame (SCS) moderated the relationship between the traumatic properties of SMs (IES-R) and the distress associated with unusual experiences (CAPS_D).

3.9.1.1. Assumptions

The same assumptions were examined and are summarised below.

3.9.1.1.1. Homoscedasticity, independent and normally distributed errors

The assumptions of linearity and homoscedasticity were met for all the moderation analyses, as graph plots of the standardised residuals and predicted values (see Appendix W) demonstrated that the majority of residuals were evenly distributed and fell between -2 and 2 (e.g., Tabachnick & Fidell, 2012), except for the univariate outlier considered and retained in Section 3.4.2 (Cohen et al., 2003). Moreover, the Durbin-Watson test was close to the value of 2 for all the following moderation analyses (ranging from 1.4 - 2.1).

3.9.1.1.2. Multicollinearity

Multicollinearity was not considered an issue for any of the moderation analyses as all VIF values were < 10 (ranging from 1.0 to 1.5) and the tolerance values were > 0.1 (ranging from .60 - 1.0; Field, 2009).

3.9.1.1.3. Outliers and influential cases

One case had a Mahalanobis (1936) distance score > 11 (Barnett & Lewis, 1978). One case was found to have a standardised residual > 2, thus meeting Field's (2009) recommendation (2.9%). Two standardised DFBeta statistics were > 1, and Cook's distance also indicated that one case was > 1. Following the recommendation from Agunis et al. (2015), the analysis was rerun without the outlier. Whilst the parameters decreased, the tests remained significant, thus the outlier was retained.

3.9.1.2. Moderation analysis: findings

In the first model, the IES-R (traumatic properties of SMs) and SCS (internal shame) were entered. These variables accounted for a significant amount of variance in CAPS_D, R^2 = .439, $F(2, 32) = 12.502$, $p < .001$. The variables were then centred and an interaction term between IES-R and SCS was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was found to account for a significant proportion of the variance in CAPS_D, $\Delta R^2 = .070$, $\Delta F(1, 31) = 4.406$, $p = .044$, $\beta = .02$, $t(31) = 2.33$, $p = .03$. Internal shame was thus found to moderate the relationship between the traumatic properties of SMs and the distress associated with unusual experiences.

The interaction between IES-R and SCS was plotted (Figure 2). This showed that the association between the traumatic properties of SMs and internal shame was the strongest for participants with low scores on the SCS (reflecting high levels of internal shame). The interaction plot showed an enhancing effect, that as the traumatic properties of SMs and internal shame increased, the distress associated with unusual experiences increased.

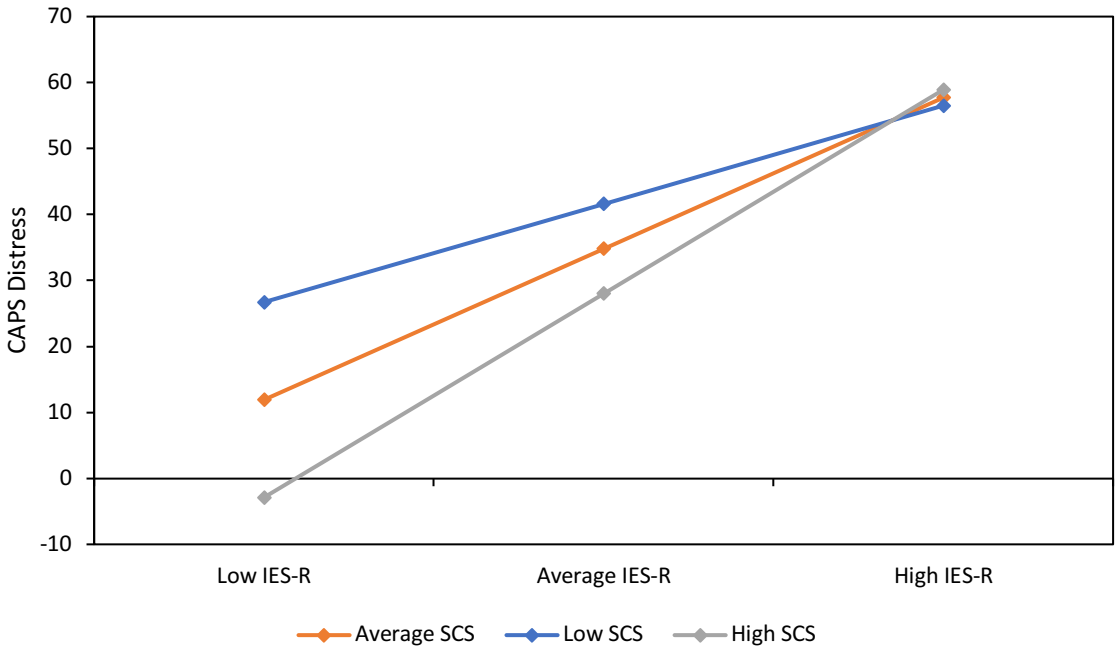


Figure 2. Internal shame as an amplifier of the relationship between traumatic SMs and distress associated with unusual experiences

3.9.2. Does internal shame moderate the relationship between traumatic SM and PDI distress?

The same moderation analysis was then conducted, replacing CAPS_D with PDI_D.

3.9.2.1. Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

3.9.2.1.1. Outliers and influential cases

One case had a Mahalanobis (1936) distance score > 11. One case was found to have a standardised residual > 2 (2.9%). Two standardised DFBeta statistics were > 1, and Cook's distance revealed one case > 1. Similarly, the analysis was conducted without the outlier and remained significant. The outlier was thus retained.

3.9.2.2. Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and SCS (internal shame) were entered. These variables accounted for a significant amount of variance in PDI_D, R^2 = .463, $F(2, 32) = 13.775$, $p < .001$. The variables were then centred and an interaction term between IES-R and SCS was computed (Aiken & West, 1991). This interaction term was entered into the regression model, and was found to account for a significant proportion of the variance in PDI_D, ΔR^2 = .077, $\Delta F(1, 31) = 5.213$, p = .029, β = .02, $t(31) = 2.58$, p = .03. Internal shame was thus found to moderate the relationship between the traumatic properties of SMs and the distress associated with unusual beliefs.

The interaction between IES-R and SCS was plotted (Figure 3). This showed that the association between the traumatic properties of SMs and internal shame was the strongest for participants with low scores on the SCS. The interaction plot showed an enhancing effect that as the traumatic properties of SMs and internal shame increased, the distress associated with unusual beliefs increased.

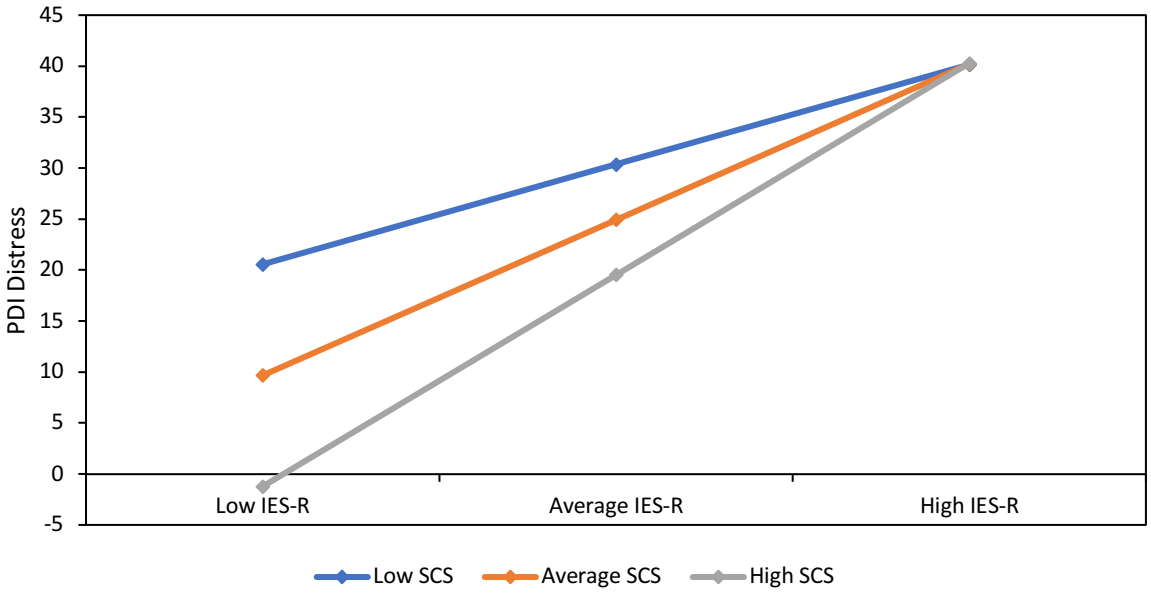


Figure 3. Internal shame as an amplifier of the relationship between traumatic SMs and distress associated with unusual beliefs

3.9.3. Does internal shame moderate the relationship between traumatic SM and PC distress?

A third moderation analysis was then performed, with PC_D as the outcome variable, in place of PDI_D.

3.9.3.1. Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

3.9.3.1.1. Outliers and influential cases

One case had a Mahalanobis (1936) distance score > 11. One case was found to have a standardised residual > 2 (2.9%). Two standardised DFBeta statistics were > 1, and Cook's distance revealed one case > 1. Again, the analysis was performed without the outlier and remained significant. The outlier was thus retained.

3.9.3.2. Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and SCS (internal shame) were entered. These variables accounted for a significant amount of variance in PC_D, R^2 = .325, $F(2, 32) = 7.718$, p =.002. The variables were then centred and an interaction term between IES-R and SCS was computed (Aiken & West, 1991). This interaction term was entered into the regression model, and was found to account for a significant proportion of the variance in PC_D, ΔR^2 = .080, $\Delta F(1, 31) = 4.172$, p = .050, β = .01, $t(31) = 2.4$, p = .02. Internal shame was thus found to moderate the relationship between the traumatic properties of SMs and the distress associated with paranoia.

The interaction between IES-R and SCS was plotted (Figure 4). This showed that the association between the traumatic properties of SMs and internal shame was the strongest for participants who scored low on the SCS. The interaction plot also showed an enhancing effect that as the traumatic properties of SMs and internal shame increased, the distress associated with paranoia increased.

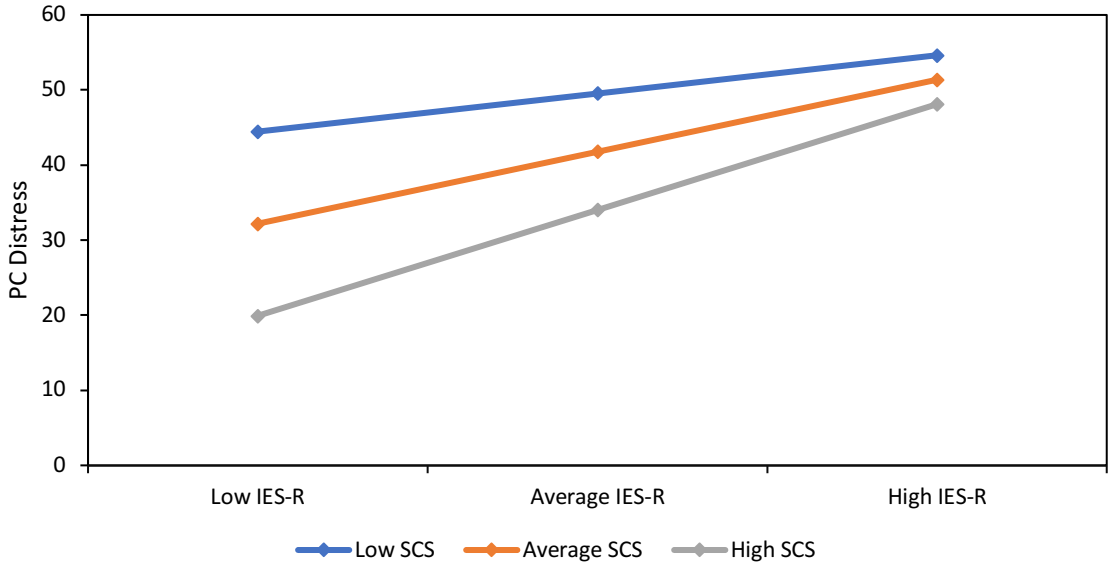


Figure 4. Internal shame as an amplifier of the relationship between traumatic SMs and distress associated with paranoia

3.10. Research question 3c: Does self-compassion act as a moderator for these relationships?

Given the body of research surrounding the impact of self-compassion (S-cS) on PTEs, four moderation analyses investigated whether S-cS had a moderating effect on the significant relationship reported between the traumatic (IES-R) and centrality (CES-S) properties of SMs and the distress associated with unusual experiences (CAPS_D), unusual beliefs (PDI_D) and paranoia (PC_D).

The traumatic features of SMs and self-compassion were found to account for a significant amount of variance in all PTEs:

- CAPS_D, R^2 = .438, F(2, 32) = 12.458, p < .001.
- PDI_D, R^2 = .345, F(2, 32) = 8.427, p = .001
- PC_D, R^2 = .343, F(2, 32) = 8.367, p = .001.

However, self-compassion was not found to moderate the relationship between the traumatic properties of SMs and the distress associated with unusual experiences, CAPS_D, ΔR^2 = .029, ΔF(1, 31) = 1.658, p = .207, unusual beliefs, PDI_D, ΔR^2 = .014, ΔF(1, 31) = .825, p = .371, or paranoia, PC_D, ΔR^2 = .016, ΔF(1, 31) = .763, p = .389.

Furthermore, self-compassion did not moderate the relationship between the centrality properties of SMs and the distress associated with unusual beliefs, PDI_D, ΔR^2 = .005, ΔF(1, 31) = .246, p = .623. Full information including consideration of the assumptions for these moderation analyses can be found in Appendix X.

4. DISCUSSION

4.1. Overview

This chapter will begin by re-visiting the aims of the research and providing a summary of the findings, followed by a discussion of the participant characteristics. Results of each research question are then considered within the context of the relevant literature, and the clinical implications are discussed. This is followed by an outline of the strengths, limitations and suggestions for future research. Lastly, the research findings are summarised, and a conclusion is provided.

4.2. Study aims and summary of findings

To attend to the gaps in the literature, this study aimed to explore the relationship between properties of SMs, shame (internal and external), PTEs (unusual experiences, beliefs and paranoia) and their associated distress, and self-compassion, in a mixed clinical/non-clinical sample of adults who were either currently or had previously experienced such PTEs. Three research questions guided this investigation.

Correlations showed significant associations between all variables apart from self-compassion (S-cS) and internal shame (SCS), which were only significantly correlated with each other. MRs demonstrated that the traumatic properties of SMs were predictive of external shame and the distress associated with unusual experiences, beliefs and paranoia. The centrality properties of SMs were found to predict the distress associated with unusual beliefs. Moderation analyses demonstrated that internal shame moderates the relationship between the traumatic properties of SMs and the distress associated with all three PTEs. In extending previous research, the findings highlighted the importance of examining key properties of SMs and levels of external and internal shame in the context of distressing PTEs. However, further exploration of these relationships is necessary in future to determine the pathways involved.

4.3. Participant characteristics

Before discussing the research findings, it is important to consider the sample characteristics in order to ascertain the generalisability of the findings alongside any possible limitations.

4.3.1. Completers and non-completers

The demographic information collected suggested that there was little difference between completers (*n* = 35) and non-completers (*n* = 84). As all but three of the measures were randomised to reduce order effects, conclusions cannot be made regarding the influence of the questionnaires (e.g., if participants were more likely to close the survey when answering a particular questionnaire). The length of the survey may have been influential however, as the non-completers began a varied number of questionnaires (ranging from one to eight) before closing the survey.

4.3.2. Final sample

Eighty-five percent of the final sample (*n* = 35) identified as White British. This finding fits with much of the shame and PTEs research outlined in the Introduction, where samples were predominately (76-85%) White (e.g., Benetti-McQuoid & Bursik, 2005; Connor & Birchwood, 2013; Freeman et al., 2005; Johnson et al., 2014). This demonstrates a gap in the research base and a possible bias in study design. Given the disproportionately high prevalence of PTEs within black and minority ethnic (BME) populations (Fearon et al., 2006; Qassem et al., 2015; Singh, Greenwood, White, & Churchill, 2007), the fact that more BME individuals are not participating in research needs addressing.

The most commonly reported diagnoses/description given to participants' mental health difficulties were depression and anxiety. Many participants (37%) selected two or more diagnoses, which supported the high levels of comorbidity that often occur with psychological distress (Kessler, Chiu, Demler, & Walters, 2005). Whilst the high levels of depression and anxiety is consistent with depression and anxiety "disorders" being the most commonly diagnosed mental health difficulty in the UK (McManus, Meltzer, Brugha, Bebbington, & Jenkins, 2009), it is surprising given the fact that this study was advertised as exploring unusual experiences, beliefs and

paranoia. Such experiences are commonly associated with mental health diagnoses such as psychosis, schizophrenia and bipolar, however only 23% of the sample selected such diagnoses. This may be reflective of the large numbers of people who have PTEs but do not access mental health services, or who do not see such diagnoses as a fitting label for their experiences.

Approximately three quarters of participants were currently accessing professional support or had accessed it in the past, compared to approximately a quarter who had never accessed it. This may indicate a selection bias, with individuals who had engaged with ideas around mental health being more likely to have chosen to participate in the study. Given that participants consisted of a convenience sample of computer literate, mostly White British adults in their twenties suggests care should be taken in extrapolating the findings to the general population of individuals with PTEs. Nevertheless, the results reported from this study may be regarded as representative of experiences for this cohort of individuals.

4.4. Research question 1: What are the characteristics of SMs?

This study examined the characteristics of SMs of individuals with PTEs by specifying the type of shame situation recalled, who featured in the SM, and examining the autobiographical, traumatic and centrality properties of the memory.

4.4.1. Type of shame situation recalled

The most frequently selected shame situation was "*criticism by an attachment figure*" (*n* = 11, 31.4%). This supports previous research in which this was also the most commonly selected situation (Matos & Pinto-Gouveia; *n* = 67, 31.5%). Nine participants (25.7%) in this study recalled SMs that involved emotional or psychological abuse; however, this did not feature as a category within previous research. These results support previous findings that have identified experiences of criticism, rejection, abuse or neglect as potentially shaming (e.g., Andrews, 2002), and support the well-established link between abuse and PTEs (e.g., Longden, Sampson, & Read, 2016).

4.4.2. Who featured in the shame memory?

Regarding the person who featured as the "shamer" in participants' SMs, parents were the most frequently selected in both this study (48.6%, *n* = 17) and in the Portuguese sample who recalled SMs with attachment figures (41.3%, *n* = 88; Matos & Pinto-Gouveia, 2014). In light of the secondary attachment literature (e.g., Ryzin, 2010), the definition of an attachment figure given to participants included teachers and other family members. Seventeen-point one percent (*n* = 7) of participants recalled being shamed by friends, compared to 12.2% (*n* = 28) in the Portuguese sample who recalled SMs with other people (Matos & Pinto-Gouveia, 2014). The fact that some participants selected friends as attachment figures could be seen to support the secondary attachment literature. Future SM research may want to examine this further by considering the distinctions made between attachment and non-attachment figures.

4.4.3. Autobiographical memory properties

Table 2 details the descriptive statistics for the AMQ items. The only known studies to report AM properties of SMs were conducted by Matos and Pinto-Gouveia (2016) and Gaynor (2016), with general population samples. Half of the AMQ items in this study presented higher mean scores than reported in Matos and Pinto-Gouveia's (2016) study. The largest differences were on the following items: reliving of *"emotions"*, the SM being a *"message/anchor",* and vividness of spatial imagery: *"setting"* (see Appendix Y).

When combined, "criticism by an attachment figure" and "emotional/psychological abuse" were the most common types of shame situation (57%). The emotional salience and significance of such experiences in childhood or adolescence may explain the higher mean scores connected to the reliving of *"emotions"* and the SM being a *"message/anchor"* in participants' lives. It may be useful for future research to examine the interrelationships between the AMQ items within this cohort, to help determine the properties that influence how individuals who have PTEs experience and respond to SMs, and how SMs become integrated in their cognitive networks and influence later processing.

4.4.4. Traumatic memory properties

The mean score on the IES-R (*M* = 44.86, *SD* = 19.46) was much higher than reported by Matos and Pinto-Gouveia (2010; *M* = 3.76, *SD* = 2.57), and Matos, Pinto-Gouveia and Duarte (2012; *M* = 4.77, *SD* = 2.37), whose samples comprised 811 students and staff, and 292 students respectively. This indicated that, on average, participants experienced much more avoidance, intrusions and hyperarousal in relation to the SM they recalled. However, this finding should be treated with caution as the SD revealed greater variability in the scores.

The higher mean score on the IES-R may have been influenced by the fact that in previous SM research, participants were requested to respond to the IES-R based on lifetime experience, whereas this study used the original wording which was based on the past seven days. The higher traumatic properties of SM scores in this study should therefore be interpreted within the context of participants' experience at that point in time rather than their lifetime experience. This information contributes to the understanding of experiences of individuals who are having or have had PTEs but limits the comparisons that can be made with previous SM research.

4.4.5. Centrality memory properties

When averaged by the number of items, CES-S scores were higher in this study (*M* = 18.95, *SD* = 8.14, 8-items) compared to participants from the general population (*M* = 43.7, *SD* = 18.31, 20-items; Pinto-Gouveia & Matos, 2011). The opposite was the case however when compared with Matos and Pinto-Gouveia's (2014) study with a general population sample (attachment SMs: *M* = 49.25, *SD* = 19.17, 20-items) and (non-attachment SMs: *M* = 52.07, *SD* = 18.24, 20-items). However, the larger SD in the comparison studies makes conclusions tentative.

Nevertheless, the findings from this study fit with Berntsen and Rubin's (2006, 2007) CET, which suggests that memories of negative emotional events can become a central part of one's identity, acting as reference points for everyday inferences and creating future expectations. Moreover, these results build on findings from previous SM research (e.g., Pinto-Gouveia & Matos, 2011), indicating that shame experiences may become central to one's identity and life story. This study contributes evidence of this process in a sample of individuals with PTEs. This could suggest that

individuals who have PTEs and have experienced criticism in their early years may be more likely to experience comparable present and future events as shaming and in the current context, linked to their PTEs. Further research is needed to examine this hypothesis.

Table 5 shows that the traumatic and centrality properties of SMs were positively and significantly associated with external shame, PTEs and their associated distress. Theoretically, the association between traumatic and central SMs and external shame supported Gilbert's (1998a) model of shame, which proposed that SMs underpin current experiences of shame. The association between the traumatic and centrality properties of SMs, PTEs and their associated distress fits with previous research demonstrating a strong association between ACEs and PTEs in adulthood (e.g., Matheson et al., 2013). These associations call attention to the potential significance of SMs and their properties for individuals who have PTEs and experience external shame.

4.5. Research question 2: Do the traumatic and centrality properties of SMs predict:
a) internal shame
b) external shame

To replicate and expand on previous research, this study investigated whether the traumatic and centrality properties of SMs predicted internal and external shame.

4.5.1. Shame

In keeping with the biopsychosocial model of shame, the results discussed above indicate that SMs can arise within a range of situations with one's family or wider social groups, all of which involve a loss of attractiveness in the eyes of others, and a threat to one's identity and social position. The findings highlight the potential relevance of SMs for individuals with PTEs.

Firstly, mean scores of the OAS-2 and SCS will be compared to previous research to contextualise the findings. There are limitations regarding the mean acting as a measure of central tendency (e.g., sensitivity to variability and extreme scores).

Consequently, conclusions will be tentative, and the SD considered. Relationships between SMs and current shame will then be discussed.

4.5.2. External shame

The total score on the OAS-2 (*M* = 27.34, *SD* = 8.97) was much higher compared to findings in previous shame research (*M* = 7.29, *SD* = 3.88; Matos et al., 2015). This was the only known study to use the OAS-2. To draw comparisons with studies that employed the longer version, mean scores were divided by the number of items in each version of the scale. Similarly, this resulted in a much higher score in this study (*M* = 3.91) compared to previous SM studies (*M* = 1.08, *SD* = 9.32 [Matos & Pinto-Gouveia, 2010], *M* = 1.10, *SD* = 9.20 [Matos et al., 2012]) and other shame research with participants who had been diagnosed with psychosis (*M* = 0.9, *SD* = 14.4 [Michail & Birchwood, 2013], *M* = 1.0, *SD* = 13.4 [Birchwood et al., 2007], *M* = 1.7, *SD* = 17.04 [Wood & Irons, 2015]).

The high levels of external shame within this sample supported evidence from the Introduction suggesting that individuals who have PTEs face higher levels of shame than the general population (Turner et al., 2013). This finding supported the hypothesis that PTEs may increase vulnerability to thoughts that others view one as flawed or inadequate, due to the internalisation of stigma and cultural stereotypes surrounding such experiences (e.g., Birchwood et al., 2007; Wood & Irons, 2017).

4.5.2.1. Properties of shame memories and external shame

In keeping with Gilbert's (1998a) model of shame and previous research (e.g., Pinto-Gouveia & Matos, 2011; Wood & Irons, 2016), the traumatic properties of SMs significantly and independently predicted current external shame. These findings indicated that individuals whose SMs act as traumatic memories are likely to think they exist negatively in the minds of others and perceive themselves as flawed, undesirable or inadequate. This fit with previous research linking SMs and recall of early experiences of criticism, rejection, neglect or abuse to shame in adulthood (e.g., Andrews, 2002).

This finding also corresponded to psychosocial models of psychosis in which the beliefs that can stem from early interpersonal traumas (e.g., about oneself as

vulnerable and others as threatening) have been linked to vulnerability to, and maintenance of, PTEs (e.g., Garety et al., 2001). SMs may thus play a key role in the experience of current external shame within individuals who have PTEs. Given the high levels of external shame within this sample, the importance of attending to SMs when working clinically with individuals with PTEs has been highlighted.

4.5.3. Internal shame

The total score on the SCS (*M* = 43.94, *SD* = 17.69) was lower than in the studies carried out by Allan and Gilbert (1995; *M* = 64.67, *SD* = 11.65), Gilbert (2000a; *M* = 59.58, *SD* = 14.96), and Gilbert and Miles (2000; *M* = 60.77, *SD* = 13.46), which featured student samples. Contrastingly, the total SCS score was slightly higher than those found by Allan and Gilbert (1995; *M* = 38.90, *SD* = 13.47]), and Gilbert and colleagues (2006; *M* = 40.63, *SD* = 17.46]), which included participants who had received a mental health diagnosis. The larger SD in this study was likely to be influenced by the outlier that was retained (see Section 3.4.2.).

The presence of internal shame within this cohort supported findings from previous research demonstrating positive associations between internal shame and paranoia in clinical (Johnson et al., 2014) and non-clinical samples (Pinto-Gouveia et al., 2014). It also supported the biopsychosocial model of shame and social rank theory which propose that the internalisation of shame may be a “low rank” defensive strategy used to minimise harm and promote social approval in individuals who experience being unable to create positive images/feelings in the mind of the other.

The higher levels of external shame compared to internal shame may indicate that the presence of an external observer who may judge individuals with PTEs is especially relevant to their experience of shame. However, considering internal shame has been shown to be related to depression, hopelessness, and a poorer prognosis for personal recovery in individuals with PTEs and stigma (e.g., Vass et al., 2015), it warrants further investigation within this cohort.

4.5.3.1. Properties of shame memories and internal shame

In contrast to previous findings (Matos, Pinto-Gouveia, & Duarte, 2012), neither the traumatic nor centrality properties of SMs significantly predicted internal shame.

However, unlike external shame, internal shame was not significantly associated with the properties of SMs. Given the small sample size and the associations between internal shame and paranoia that have been reported previously, the relationship between SMs and internal shame warrants further investigation within this cohort.

4.6. Research question 3a: Do the properties of shame memories (centrality and traumatic) predict the distress associated with:

- **unusual experiences**
- **unusual beliefs**
- **paranoia**

This study aimed to extend previous research on the relationships between shame, SMs and mental health difficulties (e.g., Matos & Pinto-Gouveia, 2014) by investigating the relationships between shame, SMs, and PTE-related distress. It was also interested in whether shame moderated any significant relationships found. Firstly, the mean scores of the PTE variables will be compared to previous research, to contextualise the findings. The key findings from the MR and moderation analyses will then be discussed.

4.6.1. Unusual beliefs

The total score on the PDI (*M* = 6.86, *SD* = 79.1) was higher than that found in a largely undergraduate non-clinical sample (*M* = 5.4, *SD* = 3.4; Bell et al., 2006), yet lower than found in a clinical sample (*M* = 11.9, *SD* = 6.0; Peters et al., 1999). Similarly, the distress (*M* = 24.86, *SD* = 24.95), preoccupation (*M* = 23.03, *SD* = 24.49) and conviction (*M* = 23.03, *SD* = 22.90) associated with unusual beliefs were higher than those found in a non-clinical sample (distress *M* = 15.5, *SD* = 14.1, preoccupation *M* = 15.4, *SD* = 14.1, conviction *M* = 20.4, *SD* = 16.0; Peters et al., 1999) but lower than in the clinical sample (distress *M* = 36.7, *SD* = 23.6, preoccupation *M* = 36.1, *SD* = 24.7, conviction *M* = 44.5, *SD* = 27.4; Peters et al., 1999). This finding is unsurprising given the mixed clinical/non-clinical sample in this study. Considering that 62.9% of the sample were not accessing professional support/had never accessed it, the lower levels of distress, preoccupation and conviction than in a clinical sample supports the argument that the difference

between those who access mental health services and those who do not may be determined by their relationship to their unusual beliefs, rather than the unusual beliefs themselves (Peters et al., 1999).

4.6.2. Unusual experiences

The total score on the CAPS (*M* = 10.49, *SD* = 8.54) was higher than found in a non-clinical sample (*M* = 7.3, *SD* = 5.8; Bell et al., 2006), yet lower than found in a clinical sample (*M* = 15.97, *SD* = 8.17; Bell, Halligan, Pugh, & Freeman, 2011). Furthermore, the mean score for the distress (*M* = 34.69, *SD* = 38.32), intrusiveness (*M* = 39.23, *SD* = 39.41) and frequency (*M* = 32.17, *SD* = 37.11) of the unusual experiences were much higher than reported in a non-clinical sample (distress *M* = 15.5, *SD* = 14.5, intrusiveness *M* = 18.0, *SD* = 17.0, frequency *M* = 14.6, *SD* = 14.2; Bell et al., 2006), yet again lower than those found in a clinical sample (distress *M* = 58.90, *SD* = 36.08, intrusiveness *M* = 59.41, *SD* = 35.77, frequency *M* = 54.21, *SD* = 34.31; Bell et al., 2011).

These findings are similar to those reported above for unusual beliefs and are again unsurprising given the mixed clinical/non-clinical sample. They provide further evidence to suggest that such experiences are not inherently “pathological” and that there may be a significant portion of the population who are able to integrate unusual experiences into their lives without accessing support. As with the data regarding unusual beliefs, it may be the distress, intrusiveness and frequency of unusual experiences that determines whether someone accesses mental health services, rather than the unusual experience itself. The finding that both the PDI and CAPS scores were higher than non-clinical samples supported previous findings (Bell et al., 2006) and suggests that the presence of unusual experiences and beliefs may be linked.

4.6.3. Paranoia

The total score on the PC (*M* = 128.26, *SD* = 56.24) was much higher compared to previous findings in non-clinical samples (*M* = 42.7, *SD* = 14.3 [Freeman et al., 2005], *M* = 26.44, *SD* = 11.67 [Moritz et al., 2012]). Unfortunately, total PC scores have not been reported in clinical samples so comparisons cannot be made.

The frequency of paranoia found in this study (*M* = 45.06, *SD* = 18.74) was similar to that found in a clinical sample (*M* = 38.03, *SD* = 14.58; Castilho et al., 2017), yet much higher than found in a non-clinical sample (*M* = 11.9, *SD* = 10.5 [Freeman et al., 2005)]. The conviction (*M* = 42.77, *SD* = 19.46) associated with paranoia was much higher than found in a non-clinical sample (*M* = 16.7, *SD* = 12; Freeman et al., 2005), yet slightly lower than in a clinical population (*M* = 52.7, *SD* = 2.0; Barreto-Carvalho et al., 2018). Lastly, the distress associated with participants' paranoia (*M* = 41.71, *SD* = 20.15) was higher than reported in both a non-clinical sample (*M* = 14.6, *SD* = 12.2; Freeman et al., 2005) and clinical sample (*M* = 33.8, *SD* = 2.1; Barreto-Carvalho et al., 2018).

These findings supported previous research that has shown the prevalence of paranoia in the general population (e.g., Bebbington et al., 2013), and shown that SMs predict paranoia (e.g., Matos et al., 2012). Indeed, an association between SMs and PTEs was expected due to the established associations between ACEs and PTEs in adulthood (e.g., Varese et al., 2012). The findings also supported Hutton and colleagues' (2013) hypothesis, that the negative beliefs about self and others (e.g., Lincoln et al., 2010) and continuous and unregulated sense of threat (e.g., Mills et al., 2007) that can be caused by SMs may be misattributed to an external source, prompting paranoia and persecutory unusual beliefs (Hutton et al., 2013).

In summary, the high levels of internal and external shame within this cohort added to an established evidence base regarding the clinical relevance of external shame and SMs to experiences of paranoia (e.g., Matos, Pinto-Gouveia, & Gilbert, 2013; Pinto-Gouveia et al., 2014). Given the clinical implications of the relationship been external shame and the distress caused by paranoia, this clearly warrants further investigation. Furthermore, as previous research has focused on paranoia, further research on the relationship between shame (internal and external) and unusual beliefs and experiences within a mixed clinical/non-clinical population is needed.

4.6.4. Prediction

The traumatic and centrality properties of SMs were found to produce a significant model as predictors of the distress associated with unusual beliefs, experiences and paranoia, accounting for 53%, 48% and 35% of their variance respectively. This may

be seen as a reasonable proportion of the variance, given the numerous factors that can influence PTE-related distress, such as fears of stigmatisation, personal relationships, the nature of the PTE itself (Griffiths, Mansell, Edge, & Tai, 2018) and loss of control (Campbell & Morrison, 2007).

Furthermore, the traumatic properties of SMs were found to significantly and independently predict the distress associated with unusual beliefs, experiences and paranoia, and the centrality properties of SMs predicted the distress associated with unusual beliefs. This fit with previous research which has found that the more traumatic the SM is, the greater the association with paranoia (Matos, Pinto-Gouveia, & Gilbert, 2013; Pinto-Gouveia et al., 2014). When SMs are traumatic, the associated intrusions, avoidance and hyper-arousal may generate biases towards interpersonal threat, therefore increasing the distress associated with paranoia.

The relationship between SMs and paranoia supported previous research that suggested that paranoia may be related to neglectful or abusive backgrounds (e.g., Mills et al, 2007). These ACEs can result in the development of negative views of the self and others, which then lead to a sense of threat to the self from others, which must be defended against. Further research is needed however, due to the wide CIs in these MRs.

As no previous studies have examined SMs and unusual experiences and beliefs or PTE-related distress, comparisons cannot be made. However, one possibility is that the traumatic nature of SMs influences the appraisal of individuals' PTEs in a negative way, as negative beliefs about PTEs have been shown to be associated with the distress associated with them (e.g., Morrison et al., 2005). Future research may therefore benefit from the use of metacognitive measures such as The Personal Beliefs about Illness Questionnaire-Revised (PBIQ-R; Birchwood, Mason, Macmillan, & Healey, 1993) when examining SMs and PTEs, to gain an understanding of the relationship between the properties of SMs and the distress associated with PTEs.

4.7. Research question 3b: Does shame (internal and external) act as a moderator for these relationships?

The finding that external shame did not moderate the relationship between the traumatic properties of SMs and the distress associated with any of the PTEs was surprising given the research demonstrating that external shame plays a key role in paranoia (e.g., Matos, Pinto-Gouveia, & Gilbert, 2013). An interaction effect would also have been expected given the high levels of external shame within this sample.

Similarly, neither internal or external shame moderated the relationship between the centrality properties of SMs and the distress associated with unusual beliefs. This indicated that SMs that become central to one's identity and life story play a key role in the distress associated with unusual beliefs, irrespective of levels of shame. These findings supported previous research which demonstrated that the more traumatic and central to one's identity and life story the SM is, the greater the association with paranoia, irrespective of levels of external shame (Matos, Pinto-Gouveia, & Gilbert, 2013). As this was the case for the distress related to unusual experiences and beliefs too, the significance of the centrality and traumatic properties of SMs within PTE-related distress is highlighted. The importance of measuring the properties of SMs when working with individuals who are distressed by PTEs is thus emphasised. A therapeutic intervention could then focus on aiming to reduce the traumatic and centrality properties of these individual's SMs.

Internal shame was found to moderate the relationship between the traumatic properties of SMs and the distress associated with all three PTEs. This finding demonstrates the significance of internal shame in PTE-related distress and the experience of traumatic SMs. It highlights the importance of reducing current levels of internal shame for individuals who have distressing PTEs and traumatic SMs, and calls for further research into the role it plays within such experiences.

4.8. Research question 3c: Does self-compassion act as a moderator for these relationships?

Firstly, the mean scores of the S-cS will be compared to previous research to contextualise the findings. The key findings from the moderation analyses will then be discussed.

4.8.1. Self-compassion

Self-compassion scores were slightly lower in this study (*M* = 2.52, *SD* = 0.7) than those found in a clinical sample (Gumley & Macbeth, 2014; *M* = 3.2, *SD* = 0.5) and non-clinical sample (Scheunemann et al., 2018; *M* = 3.2, *SD* = 0.7). Neff (2016) advises that scores of 1 - 2.5 suggest low self-compassion, scores of 2.5 - 3.5 suggest moderate self-compassion and scores of 3.5 - 5 suggest high levels of self-compassion. This implies that on average, participants in this study were experiencing moderate levels of self-compassion.

The correlational analysis (see Table 5) showed that self-compassion only had a significant positive association with internal shame. This is surprising given that previous research has demonstrated associations between self-compassion and reduced PTEs (e.g., Dudley et al., 2017) and less PLE-distress (Scheunemann et al., 2018). As this may have been due to the relatively small sample size within this study, future research should examine this further.

However, the correlation between self-compassion and internal shame supported previous findings in which self-compassion has been shown to reduce feelings of shame (e.g., Laithwaite et al., 2009). Given that internal shame moderated the relationship between the traumatic properties of SMs and the distress associated with all PTEs, increasing self-compassion could be a helpful focus of therapeutic work for individuals experiencing PTE-related distress and internal shame.

4.8.2. Moderation analyses

Self-compassion did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with any of the PTEs. Furthermore, self-compassion did not moderate the relationship between the centrality properties of SMs and the distress associated with unusual beliefs. This was again surprising, given the aforementioned research demonstrating that self-compassion was associated with less PLE-distress (Scheunemann et al., 2018). This was also in contrast to previous research demonstrating that the traumatic and centrality properties of SMs can be moderated by compassion (Ferreira et al., 2014). It is possible that the "moderate" levels of compassion found in this sample were not high enough to moderate this relationship. Perhaps the high levels of shame within this sample limited the levels of self-compassion that participants were able to experience, as has been found in previous studies (Gilbert et al., 2011, 2012; Matos & Pinto-Gouveia, 2014). Due to self-compassion having reduced PLE-distress and levels of shame in previous research, future research should investigate the potential role of self-compassion within the relationships between SMs and PTE-related distress further, and in a larger sample.

4.9. Clinical implications

PTEs can be comforting, inspiring or benign for many (Freeman et al., 2005). Indeed, many individuals who have PTEs are not distressed by them and do not seek professional help (Brett et al., 2015; Jenner, Rutten, Beuckens, Boonstra, & Systema, 2008). However, PTEs can also lead to significant distress, be associated with a range of difficulties (e.g., Kirkbride et al., 2014), and require support from mental health services.

The increasingly held conceptualisation of PTEs as existing on a continuum, being common in the general population, and representing meaningful and valid experiences, has led to a rise in research examining distinct PTEs such as hearing voices. Very little research has focused on the relationships between unusual beliefs and experiences, SMs and shame, however. This is surprising considering that shame has demonstrated greater vulnerabilities to a range of mental health difficulties, including paranoia (e.g., Pinto-Gouveia et al., 2014), and SMs have been

strongly associated with paranoia (e.g., Matos, Pinto-Gouveia, & Gilbert, 2013). As such, this study aimed to explore the relationship between these constructs, within a mixed clinical/non-clinical group. Though the findings of the present study would need to be replicated in future research due to the sample size, a number of tentative implications can be made. The clinical implications of these findings will now be outlined at an individual and societal level, followed by consideration of preventative interventions.

4.9.1. Individual therapeutic work

The findings of this study indicate that further research is required to ascertain the influence of shame and SMs on PTEs and PTE-related distress, to ensure that the most appropriate therapeutic interventions are offered when working with individuals who have such experiences.

4.9.1.1. Assessing the properties of shame memories

The findings highlighted the importance of attending to the properties of SMs within assessments, formulations and interventions, especially in individuals experiencing distress associated with PTEs. In particular it may be helpful to ascertain whether SMs encompassed traumatic properties, due to the finding that these were a significant predictor of external shame and the distress associated with all PTEs. Through the use of the IES-R as a template, this could be investigated by helping individuals to recall a significant SM whilst exploring any experiences of avoidance, hyperarousal and intrusions. This would help to determine whether addressing and reconstructing the meaning associated with traumatic and central SMs would be a helpful place to start (e.g., Narrative Exposure Therapy or trauma-focused Cognitive-Behavioural Therapy).

4.9.1.2. Reducing levels of shame

The high levels of external shame and the moderating role of internal shame in the relationship between the traumatic properties of SMs and the distress related to all PTEs demonstrates the importance of assessing levels of both internal and external shame when working clinically with this cohort. The findings of this study suggest that therapeutic interventions should focus on reducing levels of external and internal shame when working with individuals who have distressing PTEs. This is important

given that external shame can prevent affiliative connections to others and increase avoidance and social anxiety (Birchwood et al., 2007), and internal shame has been associated with social anxiety, depression, hopelessness, and a poorer prognosis for personal "recovery" in individuals with PTEs (e.g., Vass et al., 2015).

It may be clinically useful to adapt widely used therapies for PTEs (such as Cognitive Behavioural Therapy) to attend to beliefs and feelings of shame. Although evidence of efficacy is currently lacking, Cognitive-Analytic Therapy seems a feasible therapeutic intervention for addressing difficulties associated with internal shame in individuals with PTEs, due to its focus on interpersonal processes (Taylor et al., 2018).

4.9.1.3. Increasing self-compassion

Although self-compassion did not moderate the relationships between SM properties and PTE-related distress, the significant correlation between self-compassion and internal shame suggests that increasing self-compassion may be beneficial for individuals who have PTEs and experience internal shame. Given that CFT has been used effectively with individuals with psychosis (e.g., Braehler et al., 2013) and in reducing shame (e.g., Gilbert & Procter, 2006), this is also likely to be a helpful approach for people with distressing PTEs and high levels of shame.

4.9.2. Societal level

Community interventions directed at the wider societal level may help reduce levels of shame in individuals who have PTEs and could also address the social stigma and marginalisation by others in society, which has been shown to contribute to shame in this population. It is likely that some participants in this study were having distressing PTEs that they managed on their own. It is hoped that the provision of the kind of information from this study may help to normalise PTEs and aid the understanding of their occurrence. As this is an important aspect in the development of alternative understandings of PTEs, further data like those investigated in this study should be collected and made available in the public domain.

4.9.3 Preventative interventions

The significant relationships between SMs and PTEs, their associated distress, and levels of internal and external shame, indicate the crucial importance of preventative work in reducing the prevalence of such shaming experiences.

Public health initiatives (e.g., Better Mental Health for All; Mental Health Foundation, 2016) have highlighted the association between ACEs and mental health difficulties in adulthood. This has led to an increase in preventative interventions to support parents and families, alongside public health approaches to tackle stigma. The findings in this study supported the influence of ACEs on the experience of distress in adulthood, and therefore contribute further support for such initiatives.

4.10. Strengths and limitations

4.10.1. Online data collection

There were a number of benefits related to collecting data online. It facilitated wide geographical reach and participants could choose to complete the survey at a time and location that suited them. They were also able to pause the survey at any point and return to it, providing flexibility over pen and paper versions. This study was designed to enable anonymous responses. Due to the high levels of stigma associated with PTEs (e.g., Thornicroft et al., 2009), it was felt that anonymous completion would mean participants felt more able to share their experience of these.

Online samples tend to produce similar results to offline recruited samples (Bartneck, Duenser, Moltchanova, & Zawieska, 2015), however online data collection can result in high dropout rates, as occurred in this study (22.8% of recruited participants completed the survey). Furthermore, online data collection meant the researcher had to relinquish control over the research environment. It was therefore not possible to gauge the impact of the research experience on participants (BPS, 2014; Kraut et al., 2004). To minimise the risks, details of supportive agencies were provided at two stages of the survey so that participants were aware of who they should contact if the survey had raised issues. If participants did feel distressed by the information elicited, the reduced social pressure within online research may have meant participants felt more able to withdraw (Sproull & Kiesler, 1991).

4.10.2. Self-report measures

The use of self-report measures allowed the study to replicate previous research, alongside increasing the recruitment potential. However, self-report methodology has been criticised as participants can be indecisive, agreeable, or select extreme responses (Paulhus & Vazire, 2007), and do not have a place to expand upon or explain their numerical responses (Barker, Pistrang, & Elliott, 2002). Furthermore, participants can struggle to identify and/or quantify the constructs being investigated (Rosenman, Tennekoon, & Hill, 2011).

The use of self-report measures to elicit early memories can prompt concerns surrounding the influence of current emotional states on recall (Dorthe, Morten, & David, 2003; Levine & Pizarro, 2004). However, research investigating SMs through the use of structured interviewing alongside self-report measures supports the reliability of these self-report data (Matos & Pinto-Gouveia, 2014; Matos, Pinto-Gouveia, & Costa, 2013). Nonetheless, future research into PTEs may benefit from utilising the SEI to enable a more extensive investigation of SMs.

4.10.3. Measuring shame

Blum (2008) proposes that existing methodologies for examining shame are laden with problems, often related to the use of different definitions, approaches, and measures, making comparisons ineffective. This study did not evade all such issues, however it endeavoured to prevent confounding with guilt by employing measures that targeted global evaluations of the self as opposed to transgressions regarding specific behaviour (i.e., guilt). It also did this within Gilbert's (1998a) theoretical framework upon which several studies have been conducted, enabling conceptual/theoretical comparisons between studies to be made.

4.10.3.1. Measuring internal shame

The SCS was constructed as a measure of social comparison, which fits with social rank theory and corresponds to the concepts discussed regarding individuals with PTEs internalising the stigma associated with such experiences. However, the items within the SCS are not specific to PTEs. Furthermore, the SCS adopts a semantic differential methodology which forced participants to select an answer along a

spectrum of bipolar constructs that they may not have been experiencing (Barker et al., 2002). Whilst the SCS has been used in a number of PTE studies with good reliability (e.g., Wood & Irons, 2015, 2017), this area of research may benefit from a PTE-specific internal shame/social comparison measure to enable more robust claims about internal shame in this cohort to be made.

4.10.4. Measuring self-compassion

Though robust evidence exists that the S-cS (Neff, 2003b) has excellent validity (Macbeth & Gumley, 2012), people may not have enough awareness of their emotional experiences to realise the degree to which they lack self-compassion (Neff, 2003b), particularly if they unconsciously repress or avoid their negative emotions.

However, a recent review of measures and definitions of compassion suggested five elements of compassion following consolidation of existing definitions (Strauss et al., 2016). The authors examined nine measures of compassion and stated that Neff's (2003b) S-cS was one of the strongest as it featured items connected to four of the five elements from their definition of compassion. Given the importance of self-compassion for people with high levels of shame, future PTE research may benefit from a qualitative study of self-compassion, using the Narrative Compassion Scale (MacBeth, 2011) for example.

4.10.5. Measuring shame memories

This study obtained information regarding who participants felt shamed by in the SM they recalled. However, additional information concerning the shaming experience (e.g., whether others were present and how they responded, the social support available at the time) was not obtained due to the use of online data collection. This limits the conclusions that can be made, as previous research has shown that these are important elements within the experience of distress and well-being following adverse events (e.g., Brewin, Andrews, & Valentine, 2000). It would thus be beneficial for future research to replicate this study and gather further contextual information about the SM through the use of interviews.

4.10.6. Sample size and recruitment

This study recruited participants who had received a variety of mental health diagnoses and self-reported psychological difficulties. This fits with the transdiagnostic nature of SMs and shame. Furthermore, the fact that almost half the participants had not received a mental health diagnosis supports the continuum view of PTEs.

Whilst consideration was given to the length of questionnaires used, the high rate of non-completers may have been associated with the length of time the survey took to complete. PTEs can be extremely distracting and impair concentration (Craig, Cameron, & Longden, 2017). If participants were currently having unusual experiences (such as hearing voices), unusual beliefs (e.g., pertaining to an underlying motive behind the survey) or feeling paranoid, there is a possibility that these experiences contributed to decisions to withdraw.

In an effort to increase the sample size, the researcher conducted a much more vigorous approach to recruitment. Advertisement of the study was posted daily, and new avenues were pursued. These included securing the advertisement of the study to be featured in the HVN newsletter, contacting influential people on Twitter who then shared the study advertisement, and contacting more PTE-related support groups on Facebook. Attempts at recruitment began in September and continued for as long as was possible given the study deadlines (March). Unfortunately, whilst these efforts increased the number of people accessing the survey, they did not affect completion rates.

4.10.7. Analyses

The available options regarding statistical analysis were greatly limited by the sample size in this study, requiring the researcher to conduct many regressions and moderation analyses. Consequently, information regarding the causality of any of the associations between variables remains unknown. A larger sample size would have provided greater statistical power and reduced the risk of type I and II errors (Field, 2009). Moreover, whilst bootstrapping was used, the regression results should be interpreted with caution due to the small sample size. Further research with a larger sample is thus required to corroborate these findings.

Due to the sample size it was not possible to include covariates such as ethnicity and age within the analyses. Furthermore, due to the online nature of the study it was not deemed appropriate to collect surplus data that may not be used in the analyses. However, this limits the conclusions that can be drawn due to the impact of potential confounding variables. The need to control for potential confounding variables such as whether participants were taking medication, sociodemographic variables (including urbanicity and ethnicity; Krabbendam & van Os, 2005; Sharpley, Hutchinson, McKenzie, & Murray, 2001), religious beliefs (Peters, Day et al., 1999), ACEs (Kelleher et al., 2008), cannabis use (Henquet et al., 2005), current levels of shame (Matos, Pinto-Gouveia, & Gilbert, 2013), and the type of shame event recalled (Matos & Pinto-Gouveia, 2014), should therefore be considered in future studies aiming to replicate these findings.

If it were not for the small sample size, the researcher would have used structural equation modelling (SEM; Bollen, 1989) to explore the complex relationships between SMs, shame, PTEs and their related distress, and self-compassion. However, in order for the number of variables of interest to be studied, a much larger sample size was necessary (e.g., N >100; Hoogland, 1999; Tabachnick & Fidell, 2001).

4.10.8. Novelty

To the researcher's knowledge, the relationship between the variables of interest in this study had not been investigated before in this cohort, and for some variables (i.e., SMs and unusual beliefs and experiences), not in any population. This study is thus contributing to literature concerning PTEs, shame, SMs, and self-compassion. The key role of internal shame has been highlighted and clinicians working with people who have PTEs would benefit from considering this as a focus of therapeutic interventions. The relevance of SMs for the levels of distress in relation to PTEs has also been demonstrated. Results fit with both the biopsychosocial model of shame and social rank theory and offer an exciting base for future research to build on. It is hoped that the findings from this study will lead to further research regarding the influence of internal shame and traumatic SMs on the distress individuals experience in relation to PTEs.

4.10.9. Generalisability

The correlational and cross-sectional design of the study means that causal conclusions cannot be drawn from the findings. Longitudinal research should be conducted to develop an understanding of the causal direction of the relationships between the variables.

Though the researcher endeavoured to recruit a representative sample, self-selected sampling may have led to biased responses (Stanton, 1998), and access to the internet and/or computer literacy will have affected inclusion and exclusion. Furthermore, questionnaires demand a level of fluency in English, which excludes many potential participants, including those whose first language is not English. It has also been emphasised that individuals who participate in research surveys tend to not be representative of the whole population, due to usually having higher motivation, education and literacy skills (Barker et al., 2002).

The fact that 85.7% of the sample identified as White British limits the generalisability of the findings. Future research should consider the reasons for low uptake of studies such as these from BME individuals who have PTEs, and design studies that overcome these barriers. For example, the experiences being explored may be constructed differently and/or have a different relevance to individuals from certain ethnic groups. Indeed, research indicates that there are variations by race/ethnicity in both PTE endorsement and in self-reported attributions or understandings of these experiences (Bentall, 1993; Earl et al., 2015). This study's inclusion criteria could thus have been a barrier as it specified the need to have "unusual experiences, unusual beliefs and/or paranoia". Qualitative research may help to gain an understanding of the barriers involved.

4.10.10. Feedback to participants

An email was sent to all participants who expressed interest in receiving a summary of results. They were informed about how their participation contributed new literature to the evidence-base, alongside the important message about the potential benefits of accessing therapeutic interventions for SMs and external shame if they are experiencing distress relating to PTEs.

4.11. Summary of findings and conclusion

The aim of this study was to replicate and extend previous research by exploring the relationship between the traumatic and centrality features of SMs, current experiences of shame (external and internal), self-compassion and psychotic-type experiences. The results add further support to the biopsychosocial model of shame (Gilbert, 1999a) and social rank theory of psychosis (Gilbert, 2000a) in suggesting that shame is an important emotion within PTEs.

This was the first study to examine the relationship between SMs and unusual experiences and beliefs. Strong relationships were revealed, which warrant further research attention. The findings highlight the importance of attending to the properties of SMs, particularly traumatic properties, in the experience of distressing PTEs. This may be particularly relevant for individuals who also experience external shame. Internal shame should also be considered as a focus for therapeutic interventions, given that it was found to moderate the relationship between SMs and PTE-related distress. Lastly, the role of self-compassion in reducing levels of internal shame should be explored further.

As research continues to explore alternative factors that could be beneficial in supporting individuals with distressing psychotic-type experiences, it is hoped that the role of traumatic and central shame memories and high levels of shame will be given the attention they warrant.

REFERENCES

Aguinis, H., Gottfredson, R., & Joo, H. (2013). Best-Practice Recommendations for Defining, Identifying, and Handling Outliers. *Organizational Research Methods, 16*(2), 270-301.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks: Sage.

Allan, S., & Gilbert, P. (1995). A social comparison scale: Psychometric properties and relationship to psychopathology. *Personality and Individual Differences, 19*(3), 293-299.

Allen, I. E., & Seaman, C. A. (2007). Likert scales and data analyses. *Quality progress, 40*(7), 64-65.

Allison, P. D. (2012). *Handling missing data by maximum likelihood*. *SAS Global Forum, Washington, DC*. Retrieved from http://www.statisticalhorizons.com/wp-content/uploads/MissingDataByML.pdf

Allison, G., Harrop, C., & Ellet, L. (2013). Perception of peer group rank of individuals with early psychosis. *British Journal of Clinical Psychology, 52*(1), 1-11.

Alvesson, M., & Skoldberg, K. (2009). *Reflexive Methodology: New Vistas for Qualitative Research.* London: Sage Publishing.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington: American Psychiatric Publishing.

Andrews, B. (2002). Body shame and abuse in childhood. In P. Gilbert, & J. Miles (Eds.), *Body shame: Conceptualisation, research and treatment* (pp. 256-266). London: Brunner.

Andrews, B., Brewin, C., Rose, S., & Kirk, M. (2000). Predicting PTSD in Victims of Violent Crime: The Role of Shame, Anger and Blame. *Journal of Abnormal Psychology*, *109*(1), 69-73.

Andrews, B., Qian M., & Valentine, J. (2002). Predicting depressive symptoms with a new measure of shame: The Experience of Shame Scale. *British Journal of Clinical Psychology, 41*(1), 29-33.

Angermeyer, M. C., & Matschinger, H. (2003). The stigma of mental illness: effects of labelling on public attitudes towards people with mental disorder. *Acta Psychiatrica Scandinavica*, *108*(4), 304-309.

Arboleda-Florez, J. (2005). Stigma and Discrimination: An Overview. *World Psychiatry, 4*(1), 8-10.

Baggaley, A., & Hull, A. (1983). The effect of nonlinear transformations on a Likert scale. *Evaluation & the Health Professions, 6*(4), 483-491.

Bak, M., Myin-Germeys, I., Hanssen, M., Bijl, R., Vollebergh, W., Delespaul, P., & van Os, J. (2003). When does experience of psychosis result in a need for care? A prospective general population study. *Schizophrenia bulletin*, *29*(2), 349-358.

Baldwin, M. W., & Dandeneau, S. D. (2005). Understanding and modifying the relational schemas underlying insecurity. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 33-61). New York: Guilford Press.

Barker, C., Pistrang, N., & Elliott, R. (2002). *Research methods in clinical psychology: An introduction for students and practitioners* (2nd ed.). Chichester: Wiley.

Barnes, S. A., Lindborg, S. R., & Seaman Jr, J. W. (2006). Multiple imputation techniques in small sample clinical trials. *Statistics in medicine*, *25*(2), 233-245.

Barnett, V., & Lewis, T. (1978). *Outliers in statistical data*. Hoboken: Wiley.

Barney, L., Griffiths, K., Jorm, A., & Christensen, H. (2006). Stigma about depression and its impact on help-seeking intentions. *Australian and New Zealand Journal of Psychiatry, 40*(1), 51-54.

Barreto-Carvalho, C., Cabral, J., Sousa, M., da Motta, C., Benevides, J., & Peixoto, E. (2018). Validation studies of the Paranoia Checklist (Portuguese Version) in mixed sample of patients and healthy controls. *Revue Européenne de Psychologie Appliquée*, *68*(1), 5-10.

Barreto-Carvalho, C., Pinto-Gouveia, J., Peixoto, E., & da Motta, C. (2014). Paranoia as a continuum in the population. *Asian Journal of Humanities and Social Sciences, 2*(3), 382-391.

Barreto-Carvalho, C., Sousa, M., da Motta, C., Pinto-Gouveia, J., Caldeira, S. N., Peixoto, E. B.,…Fenigstein, A. (2015). Paranoia in the general population: A revised version of the general paranoia scale for adults. *Clinical Psychologist, 21*(2), 125-134.

Bartneck, C., Duenser, A., Moltchanova, E., & Zawieska, K. (2015). Comparing the similarity of responses received from studies in Amazon's Mechanical Turk to studies conducted online and with direct recruitment. *PloS one*, *10*(4), e0121595.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, *117*, 497-529.

Bebbington, P. E., McBride, O., Steel, C., Kuipers, E., Radovanovic, M., Brugha, T.,…Freeman, D. (2013). The structure of paranoia in the general population. *British Journal of Psychiatry, 202*(6), 419-427.

Beck, A. T., & Rector, N. A. (2005). Cognitive approaches to schizophrenia: theory and therapy. *Annual Review of Clinical Psychology*, *1*, 577-606.

Bell, V., Halligan, P. W., & Ellis, H. D. (2006). The Cardiff Anomalous Perceptions Scale (CAPS): a new validated measure of anomalous perceptual experience. *Schizophrenia Bulletin*, *32*(2), 366-377.

Bell, V., Halligan, P. W., Pugh, K., & Freeman, D. (2011). Correlates of perceptual distortions in clinical and non-clinical populations using the Cardiff Anomalous Perceptions Scale (CAPS): Associations with anxiety and depression and a re-validation using a representative population sample. *Psychiatry research*, *189*(3), 451-457.

Benetti-McQuoid, J., & Bursik, K. (2005). Individual differences in experiences of and responses to guilt and shame: Examining the lenses of gender and gender role. *Sex Roles, 53*(1-2), 133-142.

Bentall, R. P. (1993). Deconstructing the concept of 'schizophrenia'. *Journal of Mental Health*, *2*(3), 223-238.

Bentall, R. P. (2003). *Madness explained: psychosis and human nature*. London: Penguin Books.

Bentall, R. P., Wickham, S., Shevlin, M., & Varese, F. (2012). Do specific early-life experiences lead to specific symptoms of psychosis? A study from the 2007 The Adult Psychiatric Morbidity Survey. *Schizophrenia Bulletin*, *38*(4), 734-740.

Berntsen, D., & Rubin, D. C. (2006). Centrality of event scale: A measure of integrating a trauma into one's identity and its relation to post-traumatic stress disorder symptoms. *Behaviour Research and Therapy, 44*, 219-231.

Berntsen, D., & Rubin, D. C. (2007). When a trauma becomes a key to identity: Enhanced integration of trauma memories predicts posttraumatic stress disorder symptoms. *Applied Cognitive Psychology, 21*(4)*,* 417-431.

Berntsen, D., Willert, M., & Rubin, D. C. (2003). Splintered memories or vivid landmarks? Reliving and coherence of traumatic memories in PTSD. *Applied Cognitive Psychology*, *17*, 675- 693.

Bertoldi, J. M. (2003). The differential relationship of shame-proneness and guilt-proneness to overall psychological function and specific symptomatology in a clinical population. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 63*(8-B), 3903.

Bhaskar, R. (1998). Philosophy and scientific realism. *Critical realism: Essential readings*, 16-47.

Birchwood, M., Gilbert, P., Gilbert, J., Trower, P., Meaden, A., Hay, J.,…Miles, J. N. V. (2004). Interpersonal and role-related schema influence the relationship with the dominant "voice" in schizophrenia: A comparison of three models. *Psychological Medicine, 34*(8), 1571-1580.

Birchwood, M., Mason, R., Macmillan, F., & Healey, J. (1993). Depression, demoralisation and control over psychotic illnesses*. Psychological Medicine, 23*(2), 387-395.

Birchwood, M., Meaden, A., Trower, P., Gilbert, P., & Plaistow, J. (2000). The power and omnipotence of voices: subordination and entrapment by voices and significant others. *Psychological Medicine, 30*(2), 337-344.

Birchwood, M., Iqbal, Z., Chadwick, P., & Trower, P. (2000). Cognitive approach to depression and suicidal thinking in psychosis. Ontogeny of post-psychotic depression. *British Journal of Psychiatry*, *177*(6), 516-521.

Birchwood, M., Trower, P., Brunet, K., Gilbert, P., Iqbal, Z., & Jackson, C. (2007). Social anxiety and the shame of psychosis: A study in first episode psychosis. *Behaviour Research and Therapy, 45*(5), 1025-1037.

Bishop, P. A., & Herron, R. L. (2015). Use and misuse of the likert item responses and other ordinal measures. *International journal of exercise science*, *8*(3), 297-302.

Blum, A. (2008). Shame and Guilt, Misconceptions and Controversies: A Critical Review of the Literature. *Traumatology, 14*(3)*,* 91-102.

Bluman, A. (2011). *Elementary Statistics: A Step By Step Approach with Data CD and Formula Card* (8th ed.). New York: McGraw-Hill.

Bollen, K.A. (1989). *Structural Equations with Latent Variables*. New York: John Wiley and Sons.

Bonell, C., Fletcher, A., Morton, M., Lorenc, T., & Moore, L. (2012). Realist randomised controlled trials: a new approach to evaluating complex public health interventions. *Social science & medicine*, *75*(12), 2299-2306.

Bono, C., Ried, L. D., Kimberlin, C., & Vogel, B. (2007). Missing data on the Center for Epidemiologic Studies Depression Scale: a comparison of 4 imputation techniques. *Research in Social and Administrative Pharmacy*, *3*(1), 1-27.

Bowerman, B. L., & O'Connell, R. T. (1990). *Linear statistical models: An applied approach.* Boston: PWS-Kent Publishing Company.

Bowlby, J. (1969). *Attachment and loss Vol. 1*. Attachment. New York: Basic Books.

Bowlby, J. (1973). *Attachment and loss: Vol. 2*. Separation. New York: Basic Books.

Bowlby, J. (1980). *Attachment and loss: Vol. 3. Loss*. New York: Basic Books.

Bowlby, J. (1982). *Attachment and loss: Vol. 1. Attachment*, (2nd ed.). New York: Basic Books.

Boyd, T., & Gumley, A., (2007). An experiential perspective on persecutory paranoia: a grounded theory construction. *Psychology and Psychotherapy: Theory, Research and Practice, 80*(1), 1-22.

Braehler, C., Gumley, A., Harper, J., Wallace, S., Norrie, J., & Gilbert, P. (2013). Exploring change processes in compassion focused therapy in psychosis: Results of a feasibility randomized controlled trial. *British Journal of Clinical Psychology, 52*(2), 199-214.

Brett, C. M. C., Peters, E. R., & McGuire, P. K. (2015). Which psychotic experiences are associated with a need for clinical care?. *European Psychiatry*, *30*(5), 648-654.

Brewin, C. R., Andrews, B., & Gotlib, I. H. (1993). Psychopathology and Early Experience: A Reappraisal of Retrospective Reports. *Psychological Bulletin, 113*(1)*,* 82-98.

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology, 68*(5)*,* 748-766.

British Psychological Society (2017a). *Understanding Psychosis and Schizophrenia (Revised).* Leicester: British Psychological Society.

British Psychological Society (2014). *Code of Human Research Ethics.* Leicester: British Psychological Society.

British Psychological Society (2017b). *Ethics Guidelines for Internet-mediated Research.* Leicester: British Psychological Society.

Broucek, F. J. (1991). *Shame and the Self*. New York: Guilford Press.

Brown, D. E. (1991). *Human universals.* Philadelphia: Temple University Press.

Bruce, P., (2018). *3 Myths About the Normal Distribution*. Retrieved from https://www.elderresearch.com/blog/3-myths-about-normal-distribution

Bulmer, M. G. (2003). *Principles of Statistics*. New York: Dover Publications.

Burr, V. (2003). *Social Constructionism.* Routledge: East Sussex.

Buss, D. M. (2003). *Evolutionary psychology: The new science of mind* (2nd. ed.). Boston: Allyn and Bacon.

Byrne, S., Trower, P., Birchwood, M., Meaden, A., & Nelson, A. (2003). Command hallucinations: cognitive theory, therapy, and research. *Journal of cognitive psychotherapy*, *17*(1), 67-84.

Campbell, M. L. C., & Morrison, A. P. (2007). The subjective experience of paranoia: comparing the experience of patients with psychosis and individuals with no psychiatric history. *Clinical Psychology and Psychotherapy, 14*(1), 63-77.

Carden, L. J., Saini, P., Seddon, C., Evans, E., & Taylor, P. J. (2019). Shame, social deprivation, and the quality of the voice-hearing relationship. *Psychology and Psychotherapy: Theory, Research and Practice*, https://doi.org/10.1111/papt.12216.

Carifio, J., & Perla, R. J. (2007). Ten Common Misunderstandings, Misconceptions, Persistent Myths and urban legends about Likert scales and Likert response Formats and their Antidotes. *Journal of Social Sciences*, *3*(3), 106-116.

Carifio, J. & Perla, R. J. (2008). Resolving the 50-year Debate Around using and Misusing Likert Scales. *Medical Education, 42*(12), 1150-1152.

Cassidy, J., & Shaver, P. R. (1999). *Handbook of attachment: Theory, research and clinical applications*. New York: Guilford Press.

Castilho, P., Pinto-Gouveia, J., & Coelho, S. (2011). Recall of threat and submissiveness in childhood and self-criticism: The mediator effect of internal shame. Manuscript in preparation.

Castilho, P., Pinto, A. M., Viegas, R., Carvalho, S., Madeira, N., & Martins, M. J. (2017). External shame as a mediator between paranoia and social safeness in psychosis. *Clinical Psychologist*. 10.1111/cp.12136 /https://doi.org/10.1111/cp.12136

Chadwick, P., & Birchwood, M. (1994). The omnipotence of voices. A cognitive approach to auditory hallucinations. *British Journal of Psychiatry, 164*(2), 190-201.

Cheema, J. R. (2014). Some general guidelines for choosing missing data handling methods in educational research. *Journal of Modern Applied Statistical Methods*, *13*(2), 53-75.

Cheung, M., Gilbert, P., & Irons, C. (2004). An exploration of shame, social rank and rumination in relation to depression. *Personality and Individual Differences, 36*(5), 1143-1153.

Choong, C., Hunter, M. D., & Woodruff, P. W. R. (2007). Auditory hallucinations in those populations that do not suffer from schizophrenia. *Current Psychiatry Report*, *9*(3), 206-212.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the*

behavioural sciences. New Jersey: Lawrence Erlbaum Associates.

Cohen, J., Cohen, P., West, S., & Aiken, L. (2003). *Applied multiple regression/correlation analysis for the behavioural sciences* (3rd ed.). New Jersey: Lawrence Erlbaum Associates.

Colby, K. M. (1975). *Artificial Paranoia*. New York: Pergamon Press.

Collip, D., Oorschot, M., Thewissen, V., van Os, J., & Bentall, R. (2011). Social world interactions: How company connects to paranoia. *Psychological Medicine, 41*(5), 911-921.

Connor, C., & Birchwood, M. (2012). Abuse and dysfunctional affiliations in childhood: an exploration of their impact on voice-hearers' appraisals of power and expressed emotion. *Psychosis*, *4*(1), 19-31.

Connor, C., & Birchwood, M. (2013). Through the looking glass: self-reassuring meta-cognitive capacity and its relationship with the thematic content of voices*. Frontiers in Human Neuroscience*, *21*(7), 213.

Conway, M. A. (2005). Memory and the self. *Journal of Memory and Language, 53*(4), 594-628.

Conway, M. A., & Pleydell-Pearce, C. W. (2000). The Construction of Autobiographical Memories in the Self-Memory System. *Psychological Review, 107*(2), 261-288.

Cook, R. D (1994, 2001). *Internalized shame scale: Technical manual*. North Tonawanda: Multi-Health Systems, Inc.

Cook, R. D., & Weisberg, S. (1982). *Residuals and Influence in Regression.* New York: Chapman and Hall.

Corrigan, P. W., & Watson, C. A. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry, 1*(1), 16-20.

Corstens, D., & Longden, E. (2013). The origins of voices: links between life history and voice hearing in a survey of 100 cases. *Psychosis, 5*(3), 270-285.

Cousineau, D., & Chartier, S. (2010). Outliers detection and treatment: A review. *International Journal of Psychological Research, 3*(1), 58-67.

Cozolino, L. (2006). The social brain. *Psychotherapy in Australia*, *12*(2), 12.

Craig, L., Cameron, J., & Longden, E. (2017). Work-related experiences of people who hear voices: An occupational perspective. *British journal of occupational therapy*, *80*(12), 707-716.

Crisp, A. H., Gelder, M. G., Rix, S., Meltzer, H. I., & Rowlands, O. J. (2000). Stigmatisation of people with mental illnesses. *British Journal of Psychiatry*, *177*(1), 4-7.

Cromby, J., & Harper, D. (2009). Paranoia: A social account. *Theory & Psychology*, *19*(3), 335-361.

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1*(1), 16-29.

Dalai Lama (1995). *The power of compassion*. New Delhi: HarperCollins.

Dalai Lama (2001). *An open heart: Practicing compassion in everyday life* (Ed N. Vreeland). Hodder & Stoughton.

Darwin, C. (1872/1965). *The expression of the emotions in man and animals.* London: John Murray.

Data Protection Act. (1998). London: Stationery Office

Data Protection Act. (2018). London: Stationery Office

Davidson, R. J., & Harrington, A. (2002). *Visions of compassion: Western scientists and Tibetan Buddhists examine human nature*. Oxford: Oxford University Press.

Davidson, R. J., Kabat-Zinn, J., Schumacher J., Rosenkranz, M., Muller, D., Santorelli, S. F.,…Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, *65*(4), 564-70.

Demjén, Z., Marszalek, A., Semino, E., & Varese, F. (2019). Metaphor framing and distress in lived-experience accounts of voice-hearing. *Psychosis*, *11*(1), 16-27.

Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol response: A theoretical integration and synthesis of laboratory research. *Psychological Bulletin, 130*(3), 335-391.

DiCiccio, T. J., & Efron, B. (1996). Bootstrap confidence intervals. *Statistical science*, *11*(3), 189-228.

Dickson, J., Barsky, J., Kinderman, P., King, D., & Taylor, P. (2016). Early relationships and paranoia: Qualitative investigation of childhood experiences associated with the development of persecutory delusions. *Psychiatry Research*, *238*, 40-45.

Dillon, J., & Hornstein, G. A. (2013). Hearing voices peer support groups: a powerful alternative for people in distress. *Psychosis*, *5*(3), 286-295.

Donders, A. R. T., Van Der Heijden, G. J., Stijnen, T., & Moons, K. G. (2006). A gentle introduction to imputation of missing values. *Journal of clinical epidemiology*, *59*(10), 1087-1091.

Dong, Y., & Peng, C. Y. J. (2013). Principled missing data methods for researchers. *SpringerPlus*, *2*(1), 222.

Dorthe, B., Morten, W., & David, C. R. (2003). Splintered memories or vivid landmarks? Qualities and organization of traumatic memories with and without PTSD. *Applied Cognitive Psychology, 17*(6), 675-93.

Dudley, J., Eames, C., Mulligan, J., & Fisher, N. (2017). Mindfulness of voices, self-compassion, and secure attachment in relation to the experience of hearing voices. *British Journal of Clinical Psychology, 57*(1), 1-17.

Dudley-Marling, C., & Gurn, A. (2010). *The myth of the normal curve*. New York: Peter Lang.

Durbin, J., & Watson, G. S. (1951). Testing for Serial Correlation in Least Squares Regression II. *Biometrika, 38(1/2),* 159-177.

Dziura, J. D., Post, L. A., Zhao, Q., Fu, Z., & Peduzzi, P. (2013). Strategies for dealing with

missing data in clinical trials: from design to analysis. *The Yale journal of biology and medicine*, *86*(3), 343-358.

Earl, T. R., Fortuna, L. R., Gao, S., Williams, D. R., Neighbors, H., Takeuchi, D., & Alegría, M. (2015). An exploration of how psychotic-like symptoms are experienced, endorsed, and understood from the National Latino and Asian American Study and National Survey of American Life. *Ethnicity & health*, *20*(3), 273-292.

Edelstein, R. S., & Shaver, P. R. (2013). A cross-cultural examination of lexical studies of self-conscious emotions. In J. L. Tracy, R. W. Robins & J. P. Tangney (Eds.), *The self-conscious emotions: theory and research* (pp. 194-208). New York: Guilford Publications.

Eekhout, I., de Boer, R. M., Twisk, J. W., de Vet., H. C., & Heymans, M. W. (2012). Missing data: a systematic review of how they are reported and handled. *Epidemiology, 23*(5), 729-732.

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, *38*(4), 319-345.

Eicher, A. C., Davis, L. W., & Lysaker, P. H. (2013). Self-compassion: a novel link with symptoms in schizophrenia?. *The Journal of nervous and mental disease*, *201*(5), 389-393.

Elliott, A. C., & Woodward, W. A. (2007). *Statistical analysis quick reference guidebook with SPSS examples.* London: Sage.

Ellett, L., Lopes, B., & Chadwick, P. (2003). Paranoia in a normal college population. *The Journal of Nervous and Mental Disease, 191*(7), 425-230.

Enders, C. K. (2010). *Applied Missing Data Analysis.* London: The Guildford Press.

Faught, W. S., Colby, K. M. & Parkison, R. C. (1977). Inferences, affects, and intentions in a model of paranoia. *Cognitive Psychology 9*(2), 153-187.

Fearon, P., Kirkbride, J. B., Morgan, C., Dazzan, P., Morgan, K., Lloyd, T., ... & Mallett, R. (2006). Incidence of schizophrenia and other psychoses in ethnic minority groups: results from the MRC AESOP Study. *Psychological medicine*, *36*(11), 1541-1550.

Feng, C., Wang, H., Lu, N., Chen, T., He, H., Lu, Y., & Tu, X. M. (2014). Log- transformation and its implications for data analysis. *Shanghai Archives of Psychiatry, 26*(2)*,* 105-109.

Fenigstein, A., & Vanable, P. A. (1992). Paranoia and self-consciousness. *Journal of Personality and Social Psychology, 62*(1), 129-138.

Ferguson, T, J., Stegge, H., & Damhuis, I. (1991). Children's understanding of guilt and shame. *Child Development, 62*(4)*,* 827-839.

Ferreira, C., Matos, M., Duarte, C., & Pinto-Gouveia, J. (2014). Shame Memories and Eating Psychopathology: The Buffering Effect of Self-Compassion. *European Eating Disorders Review, 22*(6)*,* 487-494.

Fessler, D. (1999). Toward an understanding of the universality of second order emotions. In A. L. Hinton (Ed.), *Beyond nature or nurture: Biocultural approaches to the emotions* (pp. 75-116). New York: Cambridge University Press.

Fessler, D. (2004). Shame in two cultures: Implications for evolutionary approaches. *Journal of Cognition and Culture*, *4*(2), 207-262.

Fessler, D. (2007). From appeasement to conformity: Evolutionary and cultural perspectives on shame, competition, and cooperation. In J. Tracy, R. Robins, & J. Tangney (Eds.), *Self-conscious emotions: Theory and research* (2nd ed., pp. 174-193). New York: Guilford Press.

Field, A. (2009). *Discovering Statistics using SPSS Third Edition.* London: Sage.

Fornells-Ambrojo, M., Craig, T., & Garety, P. (2014). Occupational functioning in early non-affective psychosis: The role of attributional biases, symptoms and executive functioning. *Epidemiology and Psychiatric Sciences, 23*(1), 71-84.

Fowler, D., Freeman, D., Smith, B., Kuipers, E., Bebbington, P., Bashforth, H.,…Garety, P. (2006). The Brief Core Schema Scales (BCSS): psychometric properties and associations with paranoia and grandiosity in non-clinical and psychosis samples. *Psychological Medicine, 36*(6), 749-759.

Fox, J. R., Gray, N. S., & Lewis, H. (2004). Factors determining compliance with command hallucinations with violent content: the role of social rank, perceived power of the voice and voice malevolence. *Journal of Forensic Psychiatry & Psychology*, *15*(3), 511-531.

Freeman, D. (2006). Delusions in the nonclinical population. *Current Psychiatry Reports*, *8*(3), 191-204.

Freeman, D. (2007). Suspicious minds: the psychology of persecutory delusions. *Clinical Psychology Review, 27*(4), 425-457.

Freeman, D., & Garety, P. A. (2000). Comments on the content of persecutory delusions. Does the definition need clarification? *British Journal of Clinical Psychology, 39*(4), 407-414.

Freeman, D., & Garety, P. A. (2004). *Paranoia: The psychology of persecutory delusions*. Hove: Psychology Press.

Freeman, D., Garety, P. A., Kuipers, E., Fowler, D., & Bebbington, P. E. (2002). A cognitive model of persecutory delusions. *British Journal of Clinical Psychology, 41*(4), 331-347.

Freeman, D., Garety, P., Bebbington, P., Smith, B., Rollinson, R., Fowler, D.,…Dunn, G. (2005). Psychological investigation of the structure of paranoia in a non-clinical population. *The British Journal of Psychiatry, 186*(5), 427-435.

Freeman, D., Pugh, K., & Garety, P. (2008). Jumping to conclusions and paranoid ideation in the general population, *Schizophrenia Research*, *102*(1-3), 254-260.

Freeman, D., Startup, H., Dunn, G., Wingham, G., Černis, E., Evans, N.,…Kingdon, D. (2014). Persecutory delusions and psychological well-being. *Social psychiatry and psychiatric epidemiology*, *49*(7), 1045-1050.

Garety, P. A., & Freeman, D. (2013). The past and future of delusions research: from the inexplicable to the treatable. *The British Journal of Psychiatry*, *203*(5), 327-333.

Garety, P. A., Kuipers, E., Fowler, D., Freeman, D., & Bebbington, P. E. (2001). A cognitive model of the positive symptoms of psychosis. *Psychological Medicine, 31*(2), 189-195.

Gaynor, D. (2016). *First Time Mothers: Exploring The Relationship Between Shame Memories, and The Experiences of Shame Compassion and Motherhood.* Manuscript in preparation.

Geary, R. C. (1947). Testing for normality. *Biometrika*, *34*(3-4), 209-242.

Gilbert, P. (1989). *Human Nature and Suffering*. Hove: Lawrence Erlbaum Associates.

Gilbert, P. (1992). *Depression: The evolution of powerlessness*. Hove: Lawrence Erlbaum Associates.

Gilbert, P. (1997). The evolution of social attractiveness and its role in shame, humiliation, guilt and therapy. *British Journal of Medical Psychology, 70*(2), 113-147.

Gilbert, P. (1998a). What is shame? Some core issues and controversies. In P. Gilbert & B. Andrews (Eds.), *Series in affective science. Shame: Interpersonal behavior, psychopathology, and culture* (pp. 3-38). New York: Oxford University Press.

Gilbert, P. (1998b). The evolved basis and adaptive functions of cognitive distortions. *British Journal of Medical Psychology, 71*(4), 447-463.

Gilbert, P. (2000a). The relationship of shame, social anxiety, and depression: The role of the evaluation of social rank. *Clinical Psychology and Psychotherapy*, *7*(3), 174-189.

Gilbert, P. (2000b). Social mentalities: internal 'social' conflicts and the role of inner warmth and compassion in cognitive therapy. In P. Gilbert & K. G. Bailey (Eds.), *Genes on the couch: Explorations in evolutionary psychotherapy* (pp. 118-50). Oxfordshire: Routledge.

Gilbert, P. (2002). Body shame: A biopsychosocial conceptualisation and overview, with treatment implications. In P. Gilbert, & J. Miles (Eds.), *Body shame: Conceptualisation, research and treatment* (pp. 3-54). London: Brunner-Routledge.

Gilbert, P. (2003). Evolution, social roles and the differences in shame and guilt. *Social Research, 70*(4)*,* 1205-1230.

Gilbert, P. (2004). Depression: A biopsychosocial, integrative and evolutionary approach. In M. Power (Ed.), *Mood disorders: A handbook of science and practice* (pp. 99-142). Chichester: Wiley.

Gilbert, P. (2005). *Compassion: Conceptualizations, research, and use in psychotherapy*. London: Brunner-Routledge.

Gilbert, P. (2006). A biopsychosocial and evolutionary approach to formulation with a special focus on shame. In N. Tarrier (Ed.), *Case Formulation in Cognitive Behaviour Therapy: The treatment of challenging and complex cases* (pp. 81- 113). East Sussex: Routledge.

Gilbert, P. (2007). The evolution of shame as a marker for relationship security. In J. L. Tracy, R. W. Robins, & J. P. Tangney (Eds.), *The self-conscious emotions: Theory and research* (pp. 283-309). New York: Guilford Press.

Gilbert, P. (2009). Introducing compassion-focused therapy. *Advances in Psychiatric Treatment*, *15*(3), 199-208.

Gilbert, P. (2010). *Compassion focused therapy: Distinctive features.* London: Routledge.

Gilbert, P. (2014). The origins and nature of compassion focused therapy. *British Journal of Clinical Psychology, 53*(1), 6-41.

Gilbert, P., Allan, S., & Goss, K. (1996). Parental Representations, Shame, Interpersonal Problems, And Vulnerability to Psychopathology. *Clinical Psychology and Psychotherapy, 3*(1), 23-24.

Gilbert, P., Birchwood, M., Gilbert, J., Trower, P., Hay, J., Murray, B.,…Miles, J. N. V. (2001). An exploration of evolved mental mechanisms for dominant and subordinate behaviour in relation to auditory hallucinations in schizophrenia and critical thoughts in depression. *Psychological Medicine, 31*(6), 1117-1127.

Gilbert, P., Boxall, M., Cheung, M., & Irons, C. (2005). The relation of paranoid ideation and social anxiety in a mixed clinical population. *Clinical Psychology & Psychotherapy, 12*(2), 124-133.

Gilbert, P., & Gerlsma, C. (1999). Recall of shame and favouritism in relation to psychopathology. *British Journal of Clinical Psychology, 38*(4), 357-374.

Gilbert, P., & Irons, C. (2009). Shame, self-criticism, and self-compassion in adolescence. In N. B. Allen & L. B. Sheeber (Eds.), *Adolescent Emotional Development and the Emergence of Depressive Disorders* (pp. 195-214). London: Cambridge University Press.

Gilbert, P., Irons, C., Olsen, K., Gilbert, J., & McEwan, K. (2006). Interpersonal sensitivities: Their links to mood, anger and gender. *Psychology and Psychotherapy: Theory, Research and Practice*, *79*(1), 37-51.

Gilbert, P., McEwan, K., Gibbons, L., Chotai, S., Duarte, J., & Matos, M. (2012). Fears of compassion and happiness in relation to alexithymia, mindfulness and self-criticism. *Psychology and Psychotherapy: Theory, Research and Practice*, *85*(4), 374-390.

Gilbert, P., McEwan, K., Irons, C., Bhundia, R., Christie, R., Broomhead, C., & Rockliff, H. (2010). Self-harm in a mixed clinical population: the roles of self-criticism, shame, and social rank. *British Journal of Clinical Psychology, 49*(4), 563-576.

Gilbert, P., McEwan, K., Matos, M., & Rivis, A. (2011). Fears of compassion: Development of three self-report measures. *Psychology and Psychotherapy: Theory, Research, and Practice*, *84*(3), 239-255.

Gilbert, P., & McGuire, M. (1998). Shame, social roles and status: The psycho-biological continuum from monkey to human. In P. Gilbert & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology and culture* (pp. 99- 125). New York: Oxford University Press.

Gilbert, P., & Miles, J. N. (2000). Sensitivity to Social Put-Down: it's relationship to perceptions of social rank, shame, social anxiety, depression, anger and self-other blame. *Personality and individual differences*, *29*(4), 757-774.

Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy*, *13*(6), 353-379.

Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of educational research*, *42*(3), 237-288.

Godfrey-Smith, P. (2000). *Theory and reality.* Chicago: The University of Chicago Press.

Goss, K., & Allan, S. (2009). Shame, pride and eating disorders. *Clinical psychology and psychotherapy*, *16*(4), 303-316.

Goss, K., Gilbert. P., & Allan, S. (1994). An exploration of shame measures I. The "Other as Shamer Scale". *Personality and Individual Differences, 17*, 713-717.

Gracie, A., Freeman, D., Green, S., Garety, P. A., Kuipers, E., Hardy, A.,…Fowler, D. (2007). The association between traumatic experience, paranoia and hallucinations: a test of the predictions of psychological models. *Acta Psychiatrica Scandinavica, 116*(4), 280-289.

Graham, J. W. (2009). Missing Data Analysis: Making It Work in the Real World. *The Annual Review of Psychology, 60,* 549-576.

Griffiths, R., Mansell, W., Edge, D., & Tai, S. (2019). Sources of Distress in First-Episode Psychosis: A Systematic Review and Qualitative Metasynthesis. *Qualitative health research*, *29*(1), 107-123.

Gumley, A., & Macbeth, A. (2014). A pilot study exploring compassion in narratives of individuals with psychosis: implications for an attachment-based understanding of recovery. *Mental Health, Religion & Culture*, *17*(8), 794-811.

Gumley, A., & Schwannauer, M. (2006). *Staying Well After Psychosis*. Chichester: Wiley.

Gunn, R., & Bortolotti, L. (2018). Can delusions play a protective role?. *Phenomenology and the Cognitive Sciences*, *17*(4), 813-833.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis* (5th ed.). New Jersey: Prentice Hall.

Harder, D. (1995). Shame and guilt assessment and relationships of shame and guilt proneness to psychopathology. In J. Tangney & K. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 368-392). New York: Guilford.

Hardt, J., Herke, M., Brian, T., & Laubach, W. (2013). Multiple imputation of missing data: a simulation study on a binary response. *Open Journal of Statistics*, *3*(5), 370-378.

Harper, D., & Cromby, J. (2013). Paranoia: Contested and contextualised. In: B. Diamond, S. Coles, & S. Keenan (Eds.), *Madness Contested: Power and Practice* (pp. 23-41). Ross-on-Wye: PCCS Books.

Harrell, F. E. (2001). *Regression Modeling Strategies*. New York: Springer.

Harris, R. J. (1985). *A primer of multivariate statistics (2nd ed.).* New York: Academic Press.

Harrow, M., Herbener, E. S., Shanklin, A., Jobe, T. H., Rattenbury, F., & Kaplan, K. J. (2004). Follow-up of psychotic outpatients: dimensions of delusions and work functioning in schizophrenia. *Schizophrenia Bulletin*, *30*(1), 147-161.

Hayes, A. F. (2012). PROCESS: *A versatile computational tool for observed variable mediation, moderation, and conditional process modeling* [White paper]. Retrieved from http://www.afhayes.com/public/process2012.pdf

Hayward, M., Bogen-Johnston, L., & Deamer, F. (2018). Relating Therapy for distressing voices: Who, or what, is changing?. *Psychosis*, *10*(2), 132-141.

Henquet, C., Krabbendam, L., Spauwen, J., Kaplan, C., Lieb, R., Wittchen, H. U., & Van Os, J. (2004). Prospective cohort study of cannabis use, predisposition for psychosis, and psychotic symptoms in young people. *Bmj*, *330*(7481), 11.

Heriot-Maitland, C., McCarthy-Jones, S., Longden, E., & Gilbert, P. (2019). Compassion Focused Approaches to Working With Distressing Voices. *Frontiers in psychology*, *10*.

Hoogland, J. J. (1999). *The robustness of estimation methods for covariance structure analysis* (Doctoral dissertation). Retrieved from http://www.rug.nl/research/portal/files/9921687/hoogland.PDF

Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of Subjective Stress. *Psychosomatic Medicine, 41*(3), 209-218.

Hughes, K., Bellis, M. A., Hardcastle, K. A., Sethi, D., Butchart, A., Mikton, C., ...Dunne, M. P. (2017). The effect of multiple adverse childhood experiences on health: a systematic review and meta-analysis. *The Lancet Public Health*, *2*(8), e356-e366.

Hutton, P., Kelly, J., Lowens, I., Taylor, P. J., & Tai, S. (2013). Self-attacking and self-reassurance in persecutory delusions: A comparison of healthy, depressed and paranoid individuals. *Psychiatry Research, 205*(1-2), 127-136.

IBM Corp. (2016). *IBM SPSS Statistics for Windows, Version 24.0*. Armonk: IBM Corp.

Jenner, J. A., Rutten, S., Beuckens, J., Boonstra, N., & Sytema, S. (2008). Positive and useful auditory vocal hallucinations: Prevalence, characteristics, attributions, and implications for treatment. *Acta Psychiatrica Scandinavica, 118*(3), 238-245.

Johns, L. C., Kompus, K., Connell, M., Humpston, C., Lincoln, T. M., Longden, E.,…Laroi, F. (2014). Auditory verbal hallucinations in persons with and without a need for care. *Schizophrenia Bulletin, 40*(4), S255-S264.

Johns, L. C., & van Os, J. (2001). The continuity of psychotic experiences in the general population. *Clinical Psychological Review, 21*(8), 1125-1141.

Johnson, J., Jones, C., Lin, A., Wood, S., Heinze, K., & Jackson, C. (2014). Shame amplifies the association between stressful life events and paranoia amongst young adults using mental health services: Implications for understanding risk and psychological resilience. *Psychiatry Research, 220*(1-2), 217-225.

Jorm, A. F., & Wright, A. (2008). Influences on young people's stigmatising attitudes towards peers with mental disorders: national survey of young Australians and their parents. *British Journal of Psychiatry*, *192*(2), 144-149.

Kang, H. (2013). The prevention and handling of the missing data. *Korean journal of anaesthesiology*, *64*(5), 402.

Kariuki, S. N., Gichuhi, A. W., & Wanjoya, A. K. (2015). Comparison of Methods of Handling Missing Data: A Case Study of KDHS 2010 Data. *American Journal of Theoretical and Applied Statistics*, *4*(3), 192-200.

Kaufman, G. (1989). *The Psychology of Shame: Theory and Treatment*

of Shame-based Syndromes. New York: Springer.

Kelleher, I., Harley, M., Lynch, F., Arseneault, L., Fitzpatrick, C., & Cannon, M. (2008). Associations between childhood trauma, bullying and psychotic symptoms among a school-based adolescent sample. *The British Journal of Psychiatry*, *193*(5), 378-382.

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry, 62*(6)*,* 617-627.

Kim, S., Thibodeau, R., & Jorgensen, R. (2011). Shame, guilt, and depressive symptoms: A meta-analytic review. *Psychological Bulletin, 137*(1), 68-96.

Kirkbride, J., & Jones, P. B. (2011). The prevention of schizophrenia, what can we learn from eco-epidemiology? *Schizophrenia Bulletin*, *37*(2), 262-71.

Kirkbride, J., Jones, P. B., Ullrich, S., & Coid, J. (2014). Social deprivation, inequality, and the neighborhood-level incidence of psychotic syndromes in East London. *Schizophrenia Bulletin, 40*(1), 169-180.

Kohut, H. (1977). *The restoration of the self*. New York: International Universities Press.

Krabbendam, L., & Van Os, J. (2005). Schizophrenia and urbanicity: a major environmental influence- conditional on genetic risk. *Schizophrenia bulletin*, *31*(4), 795-799.

Kramer, I., Simons, C. J., Wigman, J. T., Collip, D., Jacobs, N., Derom, C.,…Wichers, M. (2013). Time-lagged moment-to-moment interplay between negative affect and paranoia: new insights in the affective pathway to psychosis. *Schizophrenia bulletin*, *40*(2), 278-286.

Kraut, R., Olson, J., Banaji, M., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: Report of board of scientific affairs' advisory group on the conduct of research on the internet. *American Psychologist, 59*(2), 105-117.

Laithwaite, H., Gumley, A., O'Hanlon, M., Collins, P., Doyle, P., Abraham, L., & Porter, S. (2009). Recovery After Psychosis (RAP): A compassion focused programme for individuals residing in high security settings. *Behavioural and Cognitive Psychotherapy*, *37*(5), 511-526.

Launay, G., & Slade, P. (1981). The measurement of hallucinatory predisposition in male and female prisoners. *Personality and Individual Differences, 2*(3), 221-234.

Leary, M. R. (2007). Motivational and emotional aspects of the self. *Annual Review of Psychology, 58*, 317-344.

Leeming, D., & Boyle, M. (2004). Shame as a social phenomenon: A critical analysis of the concept of dispositional shame. *Psychology and Psychotherapy: Theory, Research & Practice, 77*(3), 375-396.

Levine, L. J., & Pizarro, D. A. (2004). Emotion and memory research: A grumpy overview. *Social Cognition, 22*(5)*,* 530-554.

Levinson, C. A., Byrne, M., & Rodebaugh, T. L. (2016). Shame and guilt as shared vulnerability factors: Shame, but not guilt, prospectively predicts both social anxiety and bulimic symptoms. *Eating Behaviors, 22*, 188-193.

Lewis, H. B. (1971). *Shame and guilt in neurosis*. New York: International Universities Press.

Lewis, M. (1993). The emergence of human emotions. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 223-235). New York: Free Press.

Lewis, M. (1995). *Shame: the exposed self*. New York: Free Press.

Leys, C., Ley, C., Klein, O., Bernard, P., & Licata, L. (2013). Detecting outliers: Do not use standard deviation around the mean, use absolute deviation around the median. *Journal of Experimental Social Psychology, 49*(4), 764-766.

Lincoln, T. M., Hohenhaus, F., & Hartmann, M. (2012). Can paranoid thoughts be reduced by targeting negative emotions and self-esteem? An experimental investigation of a brief compassion-focused intervention. *Cognitive Therapy and Research*, *37*(2), 390-402.

Lincoln, T. M., Keller, E., & Rief, W. (2009). Die Erfassung von Wahn und Halluzinationen in der Normalbevolkerung: Deutsche Adaptationen des Peters et al. Delusions Inventory (PDI) und der Launay Slade Hallucination Scale (LSHS-R). [An assessment of delusional ideation and hallucination in the general population: German adaptations of the Peters et al. Delusions Inventory (PDI) and the Launay-Slade Hallucination Scale (LSHS-R)]. *Diagnostica, 55*(1), 29-40.

Lincoln, T. M., Mehl, S., Ziegler, M., Kesting, M. L., Exner, C., & Rief, W. (2010). Is fear of others linked to an uncertain sense of self? The relevance of self-worth, interpersonal self-concepts, and dysfunctional beliefs to paranoia. *Behavior Therapy 41*(2), 187-197.

Lindsay-Hartz, J., de Rivera, J., & Mascolo, M. F. (1995). Differentiating guilt and shame and their effects on motivations. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions. The psychology of shame, guilt, embarrassment and pride* (pp. 274-300). New York: Guilford Press.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American statistical Association*, *83*(404), 1198-1202.

Longden, E. (2017). Listening to the voices people hear: Auditory hallucinations beyond a diagnostic framework. *Journal of Humanistic Psychology, 57*(6), 573-601.

Longden, E., Corstens, D., & Dillon, J. (2013). Recovery, discovery and revolution: The work of Intervoice and the Hearing Voices Movement. In S. Coles, S. Keenan & B. Diamond (Eds.), *Madness contested: Power and practice.* Ross-on-Wye: PCCS Books.

Longden, E., Sampson, M., & Read, J. (2016). Childhood adversity and psychosis: generalised or specific effects? *Epidemiology and Psychiatric Sciences, 25*(4)*,* 49-59.

Loughbran, L. (2011). *Qualitative exploration of recovery following first episode psychosis: a grounded theory approach*. (Doctoral dissertation). Retrieved from http://theses.gla.ac.uk/2876/

MacBeth, A. (2011). *The Narrative Compassion Scale: development and validation of an interview measure of compassion and recovery in complex mental health difficulties* (Doctoral dissertation). Retrieved from: http://theses.gla.ac.uk/2875/

Macbeth, A., & Gumley, A. (2012). Exploring compassion: A meta-analysis of the association between self-compassion and psychopathology. *Clinical Psychology Review, 32*(6), 545-552.

Mahalanobis, P. C. (1936). *On the generalised distance in statistics.* In: Proceedings of the National Institute of Sciences of India, 2(1), pp. 49-56.

Malhotra, N. K. (1987). Analyzing marketing research data with incomplete information on the dependent variable. *Journal of Marketing Research*, *24*(1), 74-84.

Matheson, S. L., Shepherd, A. M., Pinchbeck, R. M., Laurens, K. R. & Carr, V. J., (2013). Childhood adversity in schizophrenia: a systematic meta-analysis. *Psychological Medicine, 43*(2), 225-238.
Matos, M. (2012). *Shame memories that shape who we are* (Doctoral dissertation). Retrieved from https://estudogeral.sib.uc.pt/handle/10316/21127

Matos, M., Duarte, J., & Pinto-Gouveia, J. (2017). The origins of fears of compassion: shame and lack of safeness memories, fears of compassion and psychopathology. *The Journal of psychology*, *151*(8), 804-819.

Matos, M., & Pinto-Gouveia, J. (2006). The shame experiences interview. Unpublished manuscript.

Matos, M., & Pinto-Gouveia, J. (2010). Shame as a traumatic memory. *Clinical Psychology & Psychotherapy, 17*(4), 299-312.

Matos, M., & Pinto-Gouveia, J. (2014). Shamed by a parent or by others: The role of attachment in shame memories relation to depression. *International Journal of Psychology and Psychological Therapy, 14*(2), 217-244.

Matos, M., & Pinto-Gouveia, J. (2016). *Shame autobiographical memory: An integrative model for the relations among autobiographical, traumatic and central shame memory features, shame feelings and psychopathology.* Manuscript submitted for publication.

Matos, M., Pinto-Gouveia, J., & Costa, V. (2013). Understanding the importance of attachment in shame traumatic memory relation to depression: The impact of emotion regulation processes. *Clinical Psychology & Psychotherapy, 20*(2), 149-165.

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2011). Other as shamer: Portuguese version and psychometric properties of an external shame measure. Manuscript submitted for publication.

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2012). Above and beyond emotional valence: The unique contribution of the central and traumatic shame memories to psychopathology vulnerability. *Memory, 20*(5), 461-477.

Matos, M., Pinto-Gouveia, J., & Duarte, C. (2013). Internalizing early memories of shame and lack of safeness and warmth: The mediating role of shame on depression. *Behavioural and cognitive psychotherapy*, *41*(4), 479-493.

Matos, M., Pinto-Gouveia, J., & Gilbert, P. (2013). The effect of shame and shame memories on paranoid ideation and social anxiety. *Clinical Psychology and Psychotherapy*, *20*(4), 334-349.

Matos, M., Pinto-Gouveia, J., Gilbert, P., Duarte, C., & Figueiredo, C. (2015). The Other as Shamer Scale – 2: Development and validation of a short version of a measure of external shame. *Personality and Individual Differences, 74*, 6-11.

Maurer, J., & Pierce, H. R. (1998). A comparison of Likert scale and traditional measures of self-efficacy. *Journal of Applied Psychology, 83*(2), 324-329.

Mawson, A., Cohen, K., & Berry, K. (2010). Reviewing evidence for the cognitive model of auditory hallucinations: the relationship between cognitive voice appraisals and distress during psychosis. *Clinical Psychology Review, 30*(2), 248-258.

May, R. (2010). *Accepting Alternative Realities.* Retrieved from http://rufusmay.com/2010/10/23/new-paper-i-have-written-on-unusual-beliefs/

Mayhew, S., & Gilbert, P. (2008). Compassionate mind training with people who hear malevolent voices: a case series report. *Clinical Psychology & Psychotherapy*, *15*(2), 113-138.

McCarthy-Jones, S. (2017). Is shame hallucinogenic?. *Frontiers in psychology*, *8*, 1310.

McCarthy-Jones, S., Castro Romero, M., McCarthy-Jones, R., Dillon, J., Cooper-Rompato, C., Kieran, K.,…Blackman, L. (2015). Hearing the unheard: an interdisciplinary, mixed methodology study of women's experiences of hearing voices (auditory verbal hallucinations). *Schizophrenia*, *6*(181), 1-16.

McCarthy-Jones, S., Smailes, D., Corvin, A., Gill, M., Morris, D., Dinan, T.,…Dudley, R. (2017). Occurrence and co-occurrence of hallucinations by modality in schizophrenia-spectrum disorders. *Psychiatry Research, 252*, 154-160.

McDonnell, G. (2017). *Exploring the relationship between Shame Memories, Self- Concept, and Wellbeing.* (Doctoral dissertation). Retrieved from http://roar.uel.ac.uk/6735/1/Gemma%20Mcdonnell-%20Revosed%20thesisi.pdf

McManus, S., Meltzer, H., Brugha, T. S., Bebbington, P. E., & Jenkins, R. (2009). *Adult psychiatric morbidity in England, 2007: results of a household survey.* The NHS Information Centre for health and social care.

McNeish, D. (2016). Missing data methods for arbitrary missingness with small samples. *Journal of Applied Statistics*, *44*(1), 24-39.

Mendes, A. L., Ferreira, C., & Marta-Simões, J. (2017). Experiential avoidance versus decentering abilities: the role of different emotional processes on disordered eating. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, *22*(3), 467-474.

Mental Health Foundation. (2016). *Better Mental Health for All: A public health approach to mental health improvement.* London: Mental Health Foundation.

Micceri, T. (1989). The unicorn, the normal curve, and other improbable creatures. *Psychological Bulletin, 105*(1), 156-166.

Michail, M., & Birchwood, M. (2012). Social anxiety disorder and shame cognitions in psychosis. *Psychological Medicine*, *43*(1), 133-142.

Mikulincer, M., & Shaver, P. (2005). Mental representations of attachment security: Theoretical foundations for a positive social psychology. In M. W. Baldwin (Ed.), *Interpersonal cognition* (pp. 233-266). New York: Guilford Press.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York: Guilford Press.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology, 67*(4)*,* 371-378.

Miller, S. (1996). *Shame in context*. Hillsdale: Analytic Press.

Mills, R. (2005). Taking stock of the developmental literature on shame. *Developmental Review*, *25*(1), 26-63.

Mills, A., Gilbert, P., Bellew, R., McEwan, K., & Gale, C. (2007). Paranoid beliefs and self-criticism in students. *Clinical Psychology & Psychotherapy, 14*(5), 358-64.

Moritz, S., Van Quaquebeke, N., & Lincoln, T. M. (2012). Jumping to conclusions is associated with paranoia but not general suspiciousness: a comparison of two versions of the probabilistic reasoning paradigm. *Schizophrenia research and treatment*, 384039.

Mork, E., Walby, F., Harkavy-Friedman, J., Barrett, E., Steen, N., Lorentzen, S.,…Mehlum, L. (2013). Clinical characteristics in schizophrenia patients with or without suicide attempts and non-suicidal self-harm: A cross-sectional study. *BMC Psychiatry, 13*(1), 255.

Morrison, A. P., Gumley, A., Schwannauer, M., Campbell, M., Gleeson, A., Griffin, E. & Gillan, K. (2005). The Beliefs about Paranoia Scale: preliminary validation of a metacognitive approach to conceptualizing paranoia. *Behavioural and Cognitive Psychotherapy, 33*(2), 153-164.

Nathanson, D. L. (1992). *Shame and pride: Affect, sex, and the birth of the self.* New York: Norton & Company.

Nayani, T. H., & David, A. S. (1996). The auditory hallucination: A phenomenological survey. *Psychological Medicine, 26*(1), 177-189.

Neale, J. M., Oltmanns, T., & Maher, B. (1998). *Delusional Beliefs*. New York: Wiley.

Neff, K. D. (2003a). Self-compassion. An alternative conceptualization of a healthy attitude toward oneself. *Self and Identity, 2*(2)*,* 85-101.

Neff, K. D. (2003b). The development and validation of a scale to measure self-compassion. *Self and Identity*, *2*(3), 223-50.

Neff, K. D. (2011). Self-compassion, self-esteem, and well-being. *Social and Personality Compass, 5*(1)*,* 1-12.

Neff, K. D. (2016). *Test how self-compassionate you are.* Retrieved from http://self-compassion.org/test-how-self-compassionate-you-are/

Neff, K. D., Rude, S. S., & Kirkpatrick, K. L. (2007). An examination of self-compassion in relation to positive psychological functioning and personality traits. *Journal of Research in Personality*, *41*(4), 908-916.

Nunnally, J. C. (1967). *Psychometric theory*. New York: McGraw-Hill.

Pallant, J. (2007). *SPSS survival manual, a step-by-step guide to data analysis using SPSS for windows*. Sydney: McGraw Hill.

Palmier-Claus, J., Berry, K., Darrell-Berry, H., Emsley, R., Parker, S., Drake, R., & Bucci, S. (2016). Childhood adversity and social functioning in psychosis: Exploring clinical and

cognitive mediators. *Psychiatry Research, 238*, 25-32.

Paulhus, D. L., & Vazire, S. (2007). The self-report method. In R. W. Robins, R. C. Fraley & R. F. Krueger (Eds.), *Handbook of research methods in personality psychology* (pp. 224-239). London: The Guilford Press.

Pearson, K. (1895). Contributions to the mathematical theory of evolution: II. Skew variation in homogeneous material. *Philosophical Transactions of the Royal Society of London Series A, 185,* 71-110.

Pechey, R., & Halligan, P. (2011). The Prevalence of Delusion-Like Beliefs Relative to Sociocultural Beliefs in the General Population. *Psychopathology*, *44*(2), 106-115.

Pedhazur, E. J. (1997). Multiple regression in behavioural research (3rd ed.). Orlando: Harcourt Brace.

Peduzzi, P., Concato, J., Feinstein, A. R., & Holford, T. R. (1995). Importance of events per independent variable in proportional hazards regression analysis II. Accuracy and precision of regression estimates. *Journal of clinical epidemiology*, *48*(12), 1503-1510.

Peduzzi, P., Concato, J., Kemper, E., Holford, T. R., & Feinstein, A. R. (1996). A simulation study of the number of events per variable in logistic regression analysis. *Journal of clinical epidemiology*, *49*(12), 1373-1379.

Penn, D. L., Corrigan, P. W., Bentall, R. P., Racenstein, J. M., & Newman, L. (1997). Social cognition in schizophrenia. *Psychological Bulletin, 121*(1), 114-132.

Peters, E., Day, S., McKenna, J., & Orbach, G. (1999). Delusional ideation in religious and psychotic populations. *British Journal of Clinical Psychology, 38*(1), 83-96.

Peters, E., Joseph, S., & Garety, P. (1999). Measurement of delusional ideation in the normal population: Introducing the PDI (Peters et al. Delusions Inventory). *Schizophrenia Bulletin, 25*(3), 553-576.

Pigott, T. D. (2001). A review of methods for missing data. *Educational research and evaluation*, *7*(4), 353-383.

Pilgrim, D. (2015). *Understanding Mental Health: A critical realist exploration.* Routledge: New York.

Pilgrim, D., & Bentall, R. (1999). The medicalisation of misery: A critical realist analysis of the concept of depression. *Journal of Mental Health, 8*(3), 261-274.

Pinto-Gouveia, J., & Matos, M. (2011). Can shame memories become a key to identity? The centrality of shame memories predicts psychopathology. *Applied Cognitive Psychology, 25*(2), 281-290.

Pinto-Gouveia, J., Castilho, P., Matos, M., & Xavier, A. (2013). Centrality of Shame Memories and Psychopathology: The Mediator Effect of Self-Criticism. *Clinical Psychology and Psychotherapy*, *20*(3), 323-334.

Pinto-Gouveia, J., Matos, M., Castilho, P., & Xavier, A. (2014). Differences between depression and paranoia: The role of emotional memories, shame and subordination. *Clinical Psychology & Psychotherapy, 21*(1), 49-61.

Poulton, R., Caspi, A., Moffit, T., Cannon, M., Murray, R., & Harrington, H. (2000). Children's self-reported psychotic symptoms and adult schizophreniform disorder: A 15-year longitudinal study. *Archives of General Psychiatry*, *57*(11), 1053-1058.

Price, J., Sloman, L., Gardner Jr, R., Gilbert, P., & Rohde, P. (1994). The social competition hypothesis of depression. *British Journal of Psychiatry*, *164*(3), 309-315.

Pyle, M., Stewart, S. L., French, P., Byrne, R., Patterson, P., Gumley, A.,…Morrison, A. P. (2015). Internalized stigma, emotional dysfunction and unusual experiences in young people at risk of psychosis. *Early intervention in psychiatry*, *9*(2), 133-140.

Qassem, T., Bebbington, P., Spiers, N., McManus, S., Jenkins, R., & Dein, S. (2015). Prevalence of psychosis in black ethnic minorities in Britain: analysis based on three national surveys. *Social psychiatry and psychiatric epidemiology*, *50*(7), 1057-1064.

Qualtrics (2018). Retrieved from https://www.qualtrics.com

Random.org (2019). *Integer generator.* Retrieved 4th May 2019 From https://www.random.org/app/

Rasch, D., & Guiard, V. (2004). The robustness of parametric statistical methods. *Psychology Science*, *46*(2), 175-208.

Read, J. (2010). Can poverty drive you mad? "Schizophrenia", socio-economic status and the case for primary prevention. *New Zealand Journal of Psychology, 39*(2), 7-19.

Read, J., & Bentall, R. P. (2012). Negative childhood experiences and mental health: theoretical, clinical and primary prevention implications. *British Journal of Psychiatry*, *200*(2), 89-91.

Read, J., van Os, J., Morrison, A. P., & Ross, C. A. (2005). Childhood trauma, psychosis and schizophrenia: a literature review with theoretical and clinical implications. *Acta Psychiatrica Scandinavica, 112*(5), 330-350.

Rector, N. A., Bagby, R. M., Segal, Z. V., Joffe, R. T., & Levitt, A. (2000). Self- criticism and dependency in depressed patients treated with cognitive therapy or psychotherapy. *Cognitive Therapy & Research, 24*(5)*,* 571-584.

Rhodes, J. E., Spencer, R., Keller, T. E., Liang, B., & Noam, G. (2006). A model for the influence of mentoring relationships on youth development. *Journal of Community Psychology, 34*(6)*,* 691-707.

Richards, S. L. (2008). *Positive aspects of the experience of psychosis: An interpretative phenomenological analysis* (Doctoral dissertation). Retrieved from http://etheses.whiterose.ac.uk/397/

Romme, M. A., & Escher, A. D. (1989). Hearing voices. *Schizophrenia Bulletin*, *15*(2), 209-216.

Romme, M. A., & Escher, S. (2000). *Making sense of voices*. London: Mind Publications.

Romme, M A., Escher, S., Dillon, J., Corstens, D., & Morris, M. (2009). *Living with voices: 50 stories of recovery*. Ross-on-Wye: PCCS Books.

Rooke, O., & Birchwood, M. (1998). Loss, humiliation and entrapment as appraisals of

schizophrenic illness: A prospective study of depressed and non-depressed patients. *British Journal of Clinical Psychology, 37*(3), 259-268.

Rosenman, R., Tennekoon, V., & Hill, L. G. (2011). Measuring bias in self-reported data. *International journal of behavioural & healthcare research*, *2*(4), 320-332.

Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.

Rubin, D. C., Burt, C. D. B., & Fifield, S. J. (2003). Experimental manipulations of the phenomenology of memory. *Memory & Cognition, 31*(6)*,* 877-886.

Rubin, D. C., Schrauf, R. W., & Greenberg, D. L. (2003). Belief and recollection of autobiographical memories. *Memory & Cognition, 31*(6), 887-901.

Ryzin, M. V. (2010). Secondary school advisors as mentors and secondary attachment figures. *Journal of Community Psychology, 38*(2)*,* 131-154.

Saggino, A., Carlucci, L., Sergi, M. R., D'Ambrosio, I., Fairfield, B., Cera, N., & Balsamo, M. (2017). A validation study of the psychometric properties of the Other as Shamer Scale–2. *SAGE, 7*(2)*,* 1-10.

Salibian-Barrera, M., & Zamar, R. H. (2002). Bootstrapping Robust Estimates of Regression. *The Annals of Statistics, 30*(2), 556-582.

Salvatore, G., Lysaker, P. H., Popolo, R., Procacci, M., Carcione, A., & Dimaggio, G. (2011). Vulnerable Self, Poor Understanding of Others' Minds, Threat Anticipation and Cognitive Biases as Triggers for Delusional Experience in Schizophrenia: A Theoretical Model. *Clinical Psychology & Psychotherapy*, *19*(3), 247-259.

Sartorius, N., Jablensky, A., Korten, A., Ernberg, G., Anker, M., Cooper, J. E., & Day, R. (1986). Early manifestations of first-contact incidence schizophrenia in different cultures. *Psychological Medicine, 16*(4), 909-928.

Schafer, J. L. (1999). Multiple imputation: a primer. *Statistical methods in medical research*, *8*(1), 3-15.

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*(2), 147-177.

Scheunemann, J., Schlier, B., Ascone, L., & Lincoln, T. M. (2018). The link between self-compassion and psychotic-like experiences: A matter of distress?.*Psychology and Psychotherapy: Theory, Research and Practice*. doi: 10.1111/papt.12193.

Schore, A. N. (1994). *Affect regulation and the origin of the self: The neurobiology of emotional development*. Mahwah: Lawrence Erlbaum.

Schore, A. N. (1998). Early shame experiences and infant brain development. In P. Gilbert & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology, and culture* (pp. 57-77). London: Oxford University Press.

Sharpley, M., Hutchinson, G., Murray, R. M., & McKenzie, K. (2001). Understanding the excess of psychosis among the African-Caribbean population in England: review of current hypotheses. *The British Journal of Psychiatry*, *178*(S40), s60-s68.

Sheen, M., Kemp, S., & Rubin, D. C. (2001). Twins dispute memory ownership: A new false memory phenomenon. *Memory & Cognition, 29*(6)*,* 779-788.

Sheffield Hearing Voices Network (2013). *Hearing Voices Network: for people who hear voices, see visions or have other unusual perceptions*. Retrieved from www.hearing-voices.org

Silverstein, S. M., & Bellack, A. S. (2008). A scientific agenda for the concept of recovery as it applies to schizophrenia. *Clinical Psychology Review*, *28*(7), 1108-1124.

Singh, S. P., Greenwood, N., White, S., & Churchill, R. (2007). Ethnicity and the Mental Health Act 1983: A systematic review. *British Journal of Psychiatry, 191*, 99-105. doi:10.1192/bjp.bp.106.030346

Sinharay, S., Stern, H. S., & Russell, D. (2001). The use of multiple imputation for the analysis of missing data. *Psychological Methods, 6*(4), 317-329.

Smith, B., Fowler, D. G., Freeman, D., Bebbington, P., Bashforth, H., Garety, P.,…Kuipers, E. (2006). Emotion and psychosis: links between depression, self-esteem, negative schematic beliefs and delusions and hallucinations *Schizophrenia Research, 86* (1-3), 181-188.

Sproull, L., & Kiesler, S. (1991). *Connections: New ways of working in the networked organization.* Cambridge: MIT Press.

Stanton, J. M. (1998). An empirical assessment of data collection using the Internet. *Personnel Psychology*, *51*(3), 709-725.

Sterne, J. A., White, I. R., Carlin, J. B., Spratt, M., Royston, P., Kenward, M. G.,…Carpenter, J. R. (2009). Multiple imputation for missing data in epidemiological and clinical research: potential and pitfalls. *BMJ*, *338*(b2393).

Stipek, D. (1995). The development of pride and shame in toddlers. In J. P. Tagney & K. W Fischer (Eds.). *Self-Conscious emotions: The psychology of shame, guilt, embarrassment and pride* (pp. 237-252). New York: Guildford Press.

Strauss, C., Lever Taylor, B., Gu, J., Kuyken, W., Baer, R., Jones, F., & Cavanagh, K. (2016). What is compassion and how can we measure it? A review of definitions and measures. *Clinical Psychology Review, 47,* 15-27.

Tabachnick, B. G., & Fidell, L. S. (2001). Using multivariate statistics (Vol. 5). *Nedham Heights: Allyn & Bacon*.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics (5th ed.).* Boston: Pearson.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics (6th ed.).* Boston: Pearson.

Talarico, J. M., LaBar, K. S., & Rubin, D. C. (2004). Emotional intensity predicts autobiographical memory experience. *Memory & Cognition, 32*(7), 1118-1132.

Tangney, J. P. (2003). Self-relevant emotions. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 384-400). New York: Guilford Press.

Tangney, J. P., & Dearing, R. L. (2002). *Shame and guilt.* New York: Guilford Press.

Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. (1996). Are shame, guilt, and embarrassment distinct emotions? *Journal of Personality and Social Psychology, 70*(6), 1256-1269.

Tangney, J. P., Wagner, P., & Gramzow, R. (1992). Proneness to shame, proneness to guilt, and psychopathology. *Journal of Abnormal Psychology, 101*(3), 469-478.

Tangney, J. P., Stuewig, J., & Mashek, D. (2007). Moral emotions and moral behaviour. *Annual Review of Psychology, 58*, 345-372.

Taylor, P., Hutton, P., & Wood, L. (2014). Are people at risk of psychosis also at risk of suicide and self-harm? A systematic review and meta-analysis. *Psychological Medicine, 45*(5), 911-926.

Taylor, P. J., Perry, A., Hutton, P., Tan, R., Fisher, N., Focone, C.,…Seddon, C. (2018). Cognitive Analytic Therapy for psychosis: A case series. *Psychology and Psychotherapy: Theory, Research and Practice*, *91*(2), 1-20.

Thode, H. J. (2002). *Testing for Normality*. New York: Marcel Dekker.

Thompson, R. J., & Berenbaum, H. (2006). Shame reactions to everyday dilemmas are associated with depressive disorder. *Cognitive Therapy and Research*, *30*(4), 415-425.

Thompson, A. H., Stuart, H., Bland, R. C., Arboleda-Florez, J., Warner, R., & Dickson, R. A. (2002). Attitudes about schizophrenia from the pilot site of the WPA worldwide campaign against the stigma of schizophrenia. *Social psychiatry and psychiatric epidemiology*, *37*(10), 475-482.

Thornicroft, G. (2007). "Most people with mental illness are not treated." *Lancet, 370*(9590), 807-808.

Thornicroft, G., Brohan, E., Rose, D., Sartorius, N., & Leese, M. (2009). Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. *Lancet, 373*(9661), 408-415.

Tissari, H. (2005). Conceptualizing shame: investigating uses of the English word shame. In R. W. McConchie, O. Timofeeva, H. Tissari, & T. Saily (Eds.), *Selected proceedings of the 2005 symposium on new approaches in English Historical Lexis* (pp. 143-54). Somerville: Cascadilla Proceedings Project.

Tomkins, S. S. (1962). *Affect imagery consciousness: Volume I: The positive affects*. New York: Springer publishing company.

Tomkins, S. S. (1981). The quest for primary motives: Biography and autobiography. *Journal of Personality and Social Psychology, 41*(2)*,* 306-329.

Turner, M. H., Bernard, M., Birchwood, M., Jackson, C., & Jones, C. (2013). The contribution of shame to post-psychotic trauma. *British Journal of Clinical Psychology*, *52*(2), 162-182.

Vagos, P., da Silva, D. R., Brazão, N., Rijo, D., & Gilbert, P. (2016). Dimensionality and measurement invariance of the Other as Shamer Scale across diverse adolescent samples. *Personality and Individual Differences*, *98*, 289-296.

van Os, J., Hannsen, M., Bijl, R., & Ravelli, A. (2000). Strauss (1969) revisited: A psychosis

continuum in the normal population?. *Schizophrenia research, 45*(1-2), 11-20.

van Os, J., & Kapur, S. (2009). Schizophrenia. *Lancet*, *347*(9690), 635-645.

van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: evidence for a psychosis proneness- persistence-impairment model of psychotic disorder. *Psychological Medicine*, *39*(2), 179-195.

Varese, F., Smeets, F., Drukker, M., Lieverse, R., Lataster, T., Viechtbauer, W.,…Bentall, R. P. (2012). Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective- and cross-sectional cohort studies. *Schizophrenia Bulletin, 38*(4), 661-71.

Vass, V., Sitko, K., West, S., & Bentall, R. P. (2017). How stigma gets under the skin: the role of stigma, self-stigma and self-esteem in subjective recovery from psychosis. *Psychosis*, *9*(3), 235-244.

Verdoux, H., & van Os, J. (2002). Psychotic symptoms in non-clinical populations and the continuum of psychosis. *Schizophrenia Research, 54*(1-2), 59-65.

Vickers, A. (1999). Comparison of an ordinal and a continuous outcome measure of muscle soreness. *International Journal of Technology Assessment in Health Care, 15*(4), 709-716.

Waite, F., Knight, M. T., & Lee, D. (2015). Self-compassion and self-criticism in recovery in psychosis: an interpretative phenomenological analysis study. *Journal of Clinical Psychology. 71*(12), 1201-1217.

Warman, D., & Martin, J. M. (2006). Cognitive insight and delusion proneness: an investigation using the Beck Cognitive Insight Scale. *Schizophrenia Research, 84*(2), 297-304.

Webb, M., Heisler, D., Call, S., Chickering, S. A., & Colburn, T. A. (2007). Shame, guilt, symptoms of depression, and reported history of psychological maltreatment. *Child Abuse & Neglect*, *31*(11-12), 1143-1153.

Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale-Revised. In J. P. Wilson & T. M. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399-411). Guildford Press: New York.

Wenzel, A., & Jordan, J. (2005). Autobiographical memory in angry and anxious individuals. *Behaviour Research and Therapy, 43*(8)*,* 1099-1109.

Widaman, K. F. (2006). Missing data: What to do with or without them. *Monographs of the Society for Research in Child Development*, *71*(3), 42-64.

Wilcox, R. R. (2005). *Introduction to Robust Estimation and Hypothesis Testing.* Burlington: Elsevier Inc.

Wilcox, R. R. (2010). *Fundamentals of modern statistical methods: substantially improving power and accuracy*. New York: Springer.

Willig, C. (2012). Perspectives on the epistemological bases for qualitative research. In H. Cooper (Ed.), *The handbook of research methods in psychology* (pp. 5-21). Washington:

American Psychological Association.

Wood, L., & Irons, C. (2015). Exploring the associations between social rank and external shame with experiences of psychosis. *Behavioural and Cognitive Psychotherapy, 44*(5), 527-538.

Wood, L., & Irons, C. (2017). Experienced stigma and its impacts in psychosis: The role of social rank and external shame. *Psychology and Psychotherapy: Theory, Research and Practice*, *90*(3), 419-431.

Wood, L., Byrne, R., Burke, E., Enache, G., & Morrison, A. P. (2017). The impact of stigma on emotional distress and recovery from psychosis: The mediatory role of internalised shame and self-esteem. *Psychiatry research*, *255*, 94-100.

Woods, A. (2017). On shame and voice-hearing. *Medical Humanities*, *43*(4), 251-256.

Wright, D. B., & Field, A. (2009). Giving your data the bootstrap. *The Psychologist, 22*(5), 412-413.

Xavier, A., Gouveia, J. P., & Cunha, M. (2016). Non-suicidal self-injury in adolescence: The role of shame, self-criticism and fear of self-compassion. *Child & Youth Care Forum*, *45*(4), 571-586.

APPENDICES

Appendix A: Literature search I- shame, psychotic-type experiences, and compassion

The following search terms were used:

- psychosis
- psychoses
- psychotic
- schizophren*
- paranoi*
- voice
- shame
- self-criticism
- self-blame
- self-hatred
- compassion

Modifiers 'OR' and 'AND' combining the search terms were applied to refine combinations of the search terms.

Limiters included:

- English language only
- Adult only (> 18)
- Human only
- Keyword and abstract only

The search terms and limiters above were entered into the following databases: Academic Search Complete, CINAHL Plus, PsycINFO, PsychARTICLES, via EBSCO and Scopus. A total of 94 pieces of literature were retrieved via EBSCO and 26 via Scopus. The titles and abstracts were examined for relevance to the literature review title. Google Scholar and other open source repositories (Research Gate, Academia, CORE), alongside grey literature such as unpublished work were searched to find further relevant articles. The reference lists of the relevant literature identified were also examined in order to uncover any relevant articles not featured in previous searches.

Inclusion criteria:

- All studies were considered regardless of:
    - the date of publication
    - the country of origin
    - the type of methodology
    - how shame was investigated

Exclusion criteria:

- Poetry, fiction or other artistic literature
- Studies that did not use a measure of shame or psychotic-type experiences

The search identified six relevant pieces of literature to be included in literature review I.

Appendix B: Literature search II- shame memories, psychotic-type experiences and compassion

The following search terms were used:

- shame memories
- early shame experiences
- psychosis
- psychoses
- psychotic
- schizophren*
- paranoi*
- voice
- shame
- self-criticism
- self-blame
- self-hatred
- compassion

Modifiers 'OR' and 'AND' combining the search terms were applied to refine combinations of the search terms.

Limiters included:

- English language only
- Adults only (> 18 years)
- Human only
- Keyword and abstract only

The search terms and limiters above were entered into the following databases: Academic Search Complete, CINAHL Plus, PsycINFO, PsychARTICLES, via EBSCO and Scopus. A total of 12 pieces of literature were identified via EBSCO and 43 via Scopus. The titles and abstracts were examined for relevance to the literature review title. Google Scholar and other open source repositories (Research Gate, Academia, CORE), alongside grey literature such as unpublished work were searched to find further relevant articles. The reference lists of the relevant literature identified were also examined in order to uncover any relevant articles not featured in previous searches.

Inclusion criteria:

- All studies were considered regardless of:
    - the date of publication
    - the country of origin
    - the type of methodology
    - how shame memories were investigated

Exclusion criteria:

- Poetry, fiction or other artistic literature
- Studies that did not explicitly measure SMs as part of the methodology

The search identified six relevant pieces of literature to be included in literature review II.

Appendix C: Ethical approval

School of Psychology Research Ethics Committee

NOTICE OF ETHICS REVIEW DECISION

For research involving human participants
BSc/MSc/MA/Professional Doctorates in Clinical, Counselling and Educational Psychology

REVIEWER: Mark Harwood

SUPERVISOR: **Trishna Patel**

STUDENT: Suzy Lechler

Course: Professional Doctorate in Clinical Psychology

Title of proposed study: Unusual Experiences, Beliefs and Paranoia: Exploring the Relationship with Shame Memories and Compassion

DECISION OPTIONS:

1. **APPROVED:** Ethics approval for the above named research study has been granted from the date of approval (see end of this notice) to the date it is submitted for assessment/examination.

2. **APPROVED, BUT MINOR AMENDMENTS ARE REQUIRED BEFORE THE RESEARCH COMMENCES** (see Minor Amendments box below)**:** In this circumstance, re-submission of an ethics application is not required but the student must confirm with their supervisor that all minor amendments have been made before the research commences. Students are to do this by filling in the confirmation box below when all amendments have been attended to and emailing a copy of this decision notice to her/his supervisor for their records. The supervisor will then forward the student's confirmation to the School for its records.

3. **NOT APPROVED, MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED** (see Major Amendments box below)**:** In this circumstance, a revised ethics application must be submitted and approved before any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.

DECISION ON THE ABOVE-NAMED PROPOSED RESEARCH STUDY
(Please indicate the decision according to one of the 3 options above

1) Approved. Given the 155 items listed you might consider letting participants know that they can complete the questionnaire over >1 session (as Qualtrics saves data on each page advance)- unless you fear too much drop off as a consequence.

Minor amendments required *(for reviewer)*:

Major amendments required *(for reviewer):*

Confirmation of making the above minor amendments *(for students)*:

I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data.

Student's name *(Typed name to act as signature):* Suzy Lechler
Student number: u1622874

Date: 01/05/18

(Please submit a copy of this decision letter to your supervisor with this box completed, if minor amendments to your ethics application are required)

ASSESSMENT OF RISK TO RESEACHER *(for reviewer)*

Has an adequate risk assessment been offered in the application form?

YES / NO

Please request resubmission with an adequate risk assessment

If the proposed research could expose the researcher to any of kind of emotional, physical or health and safety hazard? Please rate the degree of risk:

☐ HIGH

Please do not approve a high risk application and refer to the Chair of Ethics. Travel to countries/provinces/areas deemed to be high risk should not be permitted and an application not approved on this basis. If unsure please refer to the Chair of Ethics.

☐ MEDIUM (Please approve but with appropriate recommendations)

[X] LOW

Reviewer comments in relation to researcher risk (if any).

Reviewer *(Typed name to act as signature)*: M. Harwood

Date: 26/04/18

This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Research Ethics Committee

RESEARCHER PLEASE NOTE:

For the researcher and participants involved in the above named study to be covered by UEL's Insurance, prior ethics approval from the School of Psychology (acting on behalf of the UEL Research Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.

For a copy of UELs Personal Accident & Travel Insurance Policy, please see the Ethics Folder in the Psychology Noticeboard

Appendix D: Participant information sheet

Information Sheet

UNIVERSITY OF EAST LONDON

School of Psychology
Stratford Campus
Water Lane
London E15 4LZ

Researcher: Suzy Lechler
Email: u1622874@uel.ac.uk

Shame Memories and Unusual Experiences, Beliefs & Paranoia

My name is Suzy Lechler. I am a Trainee Clinical Psychologist studying at the University of East London. I would like to invite you to participate in a research study as part of my Professional Doctorate in Clinical Psychology. Before you decide whether you would like to participate or not, it is important for you to understand the aims of the study and what participation would entail. Please read through the following information carefully before deciding whether or not you would like to participate. Do talk to others about the study if that would feel helpful. If anything needs further explanation or you have any unanswered questions, please feel free to contact me or my supervisor using the contact details at the end of this information page.

What is the purpose of this study?
The aim of this study is to explore the relationship between past experiences of shame on current feelings of shame and how this may relate to the nature of unusual experiences, beliefs and paranoia and the distress these cause. Unusual experiences such as hearing voices, unusual beliefs and paranoia are common. Whilst some people find these experiences comforting or inspiring, they can be a highly distressing experience for others, and may lead to feeling different or inadequate in some way. This can be hard to cope with and may lead one to feel more distressed and experience other mental health difficulties (e.g., low mood or anxiety). Unusual experiences, beliefs and paranoia are often associated with past experiences and memories from childhood and adolescence. This study will focus on memories where shame is a key feature.

It is hoped that this study will be valuable in providing information that could help improve approaches to psychological assessment and intervention that are intended to enhance the well-being of people who have psychotic-type experiences and high levels of shame, in a non-pathologising way.

Who can take part in the study?
Men or women:

- aged 18+ years
- living in the UK
- who have some fluency in English
- who have/have had unusual experiences, unusual beliefs and/or paranoia

What will be involved if I take part?
You will be asked to fill out a variety of questionnaires, to which there are no right or wrong answers. The questionnaires will ask you about a previous experience of feeling shame, current feelings of shame and self-compassion, and about your unusual experiences, beliefs and paranoia and the distress that these cause. The questionnaires should take roughly 30-40 minutes to complete, however you can complete them at your own pace.

What are my options for taking part in the study?
It is completely your decision whether you take part or not. If you do choose to participate, you can change your mind at any time before submitting your responses. The reason you cannot withdraw once your responses are submitted is because the responses you give are anonymous and therefore cannot be identified once they are submitted.

If you decide to take part, you will have the chance enter into a prize draw to win one of four £25 'Love2Shop' vouchers. If you wish to be entered into the draw, you will be required to provide a contact detail such as an email address. These details will not be connected to your responses in any way however. All contact details given will be deleted once the winner is identified.

Are there any disadvantages or risks to taking part?
Completing the questionnaires may lead to an increased awareness of potentially difficult experiences from the past and/or present that you have not previously thought about. If you do feel distressed in any way, there are a range of services that you can contact for support, such as:

1) **Your General Practitioner** (GP)
2) **Hearing Voices Network** - an organisation that offers information, support and understanding to people who hear voices and those who support them. Contact number- 0114 271 8210 Email nhvn@hotmail.co.uk to find out what support is available in your area, or to join their online forum.
3) **Mind** - provides information and support about mental health problems from 9am-6pm Monday-Friday. Contact number- 0300 123 3393 Website-www.mind.org.uk
4) **Sane** - provides a national out-of-hours helpline (from 6pm-11pm) for individuals experiencing distress. Contact number- 0300 304 7000 Website-www.sane.org.uk
5) **Samaritans** - A 24-hour confidential helpline that is open 365 days a year. Contact number- 116 123 (UK) Email jo@samaritans.org

In an emergency please call an ambulance or go to your nearest A&E department

What if I have a complaint about the study?
If you have any concerns about the study, you can ask to speak to the researcher or their supervisor. If you are still unhappy and would like to make a formal complaint, you can do this through University of East London's Research Ethics Committee (Telephone: 020 8223 6683, Email: researchethics@uel.ac.uk).

Will my information remain confidential?
All the information you provide will be completely confidential and only shared with my supervisor. Any personal details will be stored separately and you will be allocated an identification number, so the responses you give to the questionnaires are completely anonymous and cannot be linked to you.

If you would like to receive a summary of the results of the study once it is completed you will be asked to provide a contact detail, such as your email address. As with the contact details for the prize draw, this will not be linked to your questionnaire responses in any way and will be stored in a password protected file on the researcher's computer. This will only be accessible by the researcher and will be destroyed as soon as the prize winner is identified and the summary of the results have been sent to interested participants.

What will happen to the results of the study?
The results will be written up as a doctoral thesis and submitted for publication in a psychological journal. The results may also be used in conference presentations. All of the information you provide will remain anonymous, and all the data from the study will be destroyed after 3 years.

Who has reviewed the study?
All research conducted in the University of East London is reviewed by an independent group of people, called a Research Ethics Committee.

Who can I contact if I have any questions?
The researcher, Suzy Lechler can be contacted at u1622874@uel.ac.uk
Her supervisor, Dr Trishna Patel can be contacted at t.patel@uel.ac.uk

Thank you for taking the time to read this information. **Please print and/or save** this page for your reference.

Appendix E: Consent form

Consent Form

If you agree to participate**, please click on all the statements below** indicating your understanding of what is involved in the study and your consent to participate.

I confirm that I have read and understood the information sheet for this study and have saved a copy for my reference.

I have been given the opportunity to ask any questions I have about the study and have received satisfactory answers.

I understand that my involvement in this study is voluntary.

I understand that I may withdraw from the study prior to submitting the questionnaire, without stating a reason.

I understand that if I withdraw after submitting the questionnaire, my responses cannot be linked to me. As a result, all the information I have provided up to that point will not be recorded.

I understand that my involvement in this study and any personal data from this research will remain strictly confidential. Only the researcher and her supervisor will have access to the data, to which I give my permission. It has been explained to me what will happen to the data once the research has been completed.

I understand that all data from the study will be destroyed after 3 years.

I hereby freely and fully consent to participate in this study, which has been fully explained to me.

Appendix F: Participant debrief sheet

Shame Memories and Unusual Experiences, Beliefs & Paranoia

Thank you very much for taking part in this study. The aim of the study is to explore the relationship between past experiences of shame on current feelings of shame and how this may relate to the nature of unusual experiences, beliefs and paranoia, and the distress these cause. To explore this, you were asked to think about a time in your childhood when you experienced shame (i.e., shame memory). You also completed questionnaires about your current feelings of shame, your unusual experiences, beliefs and paranoia, and self-compassion.

It is hoped that the findings from this study will help to develop the type of support available to people who experience paranoia, unusual beliefs and unusual experiences and high levels of shame in adulthood. This research is very important as these experiences and feelings can be distressing and difficult to manage. In appreciation of your time, you were given the opportunity to win a £25 Amazon voucher through a prize draw.

If you have any questions with regards to the study at this point, please do not hesitate to contact:

The researcher, Suzy Lechler, email- u1622874@uel.ac.uk
Her supervisor, Dr Trishna Patel, email- t.patel@uel.ac.uk

I would like to remind you that the personal information you provided as part of the study will remain confidential and will not appear in any publications.

If you feel any distress or discomfort in response to taking part in this study, please use the 'sources of support' found below:

1) **Your General Practitioner** (GP)
2) **Hearing Voices Network** - an organisation that offers information, support and understanding to people who hear voices and those who support them. Contact number- 0114 271 8210 Email nhvn@hotmail.co.uk to find out what support is available in your area, or to join their online forum.
3) **Mind** - provides information and support about mental health problems from 9am-6pm Monday-Friday. Contact number- 0300 123 3393 Website-www.mind.org.uk
4) **Sane** - provides a national out-of-hours helpline (from 6pm-11pm) for individuals experiencing distress. Contact number- 0300 304 7000 Website-www.sane.org.uk
5) **Samaritans** - A 24-hour confidential helpline that is open 365 days a year. Contact number- 116 123 (UK) Email jo@samaritans.org

In an emergency please call for an ambulance or go to your nearest A&E department

If you would like to **receive a summary of the results of this study** once it is completed and/or would like to be **entered into the prize draw** to win one of four £25 'Love2Shop' vouchers, please email the researcher on the email address above. Your responses cannot be linked to your email address in any way. Please specify one of the following three options in the subject of your email:

1. Request a summary of results
2. Request entry to the prize draw
3. Request summary of the results and entry to the prize draw

You do not need to add any further information to your email.

Thank you again for your time.

Appendix G: Sample of sites of advertisement

Forums:
- Talk mental health forum
- Hearing Voices forum

Example of Facebook groups:
- Psychosis Support Group 1
- Hearing Voices Network Support Group
- Mental health group bpd bipolar psychosis anxiety eating disorders
- Intervoice: The International Hearing Voices Movement
- Didsbury Hearing Voices Group
- Schizophrenia Unlimited
- Understanding Schizophrenia
- Schizophrenia and Mental Health
- Schizo Central
- Mind

Example of SubReddits:
- /r/SampleSize
- /r/researchpsychology
- /r/mentalhealth
- /r/schizophrenia
- /r/northernireland
- /r/depression
- /r/getting_over_it
- /r/Scotland

Example of Twitter hashtags:
- #Unusualexperiences
- #mentalhealth

Example of Twitter newsfeeds:
- @TalkingSense_
- @ISPSUK
- @eolasinntinn
- @HVN_England
- @hearingvoice
- @Rufusmay
- @psyECR
- @RSInPsychosis

Newsletter:
- London Hearing Voices Network

Appendix H: Advertising messages

Long version for forums and Reddit

Hello, my name is Suzy Lechler. I am currently training as a Clinical Psychologist and as part of my doctoral degree, I am carrying out some important research that I hope you can help me with. Unusual experiences (e.g. hearing voices), unusual beliefs and paranoia are common. These experiences are often associated with past experiences and memories from childhood and adolescence. I am interested in your experiences and memories and would like to invite you to take part in my study. I am keen to hear from everyone; however these unusual experiences make you feel. It is hoped that this study will be valuable in providing information that could help improve approaches to psychological assessment and intervention that are intended to enhance the well-being of people who have psychotic type experiences and high levels of shame, in a non-pathologising way.

You must be aged over 18, living in the UK and have a degree of fluency in English to participate in this study. If you would like to participate, you will be asked to complete a number of questionnaires via a secure online survey, to which there are no right or wrong answers. These should take approximately 30-40 minutes.

In appreciation of your time, I am offering all participants the chance to be entered into a prize draw to **win one of four £25 Love2Shop vouchers.** Please click on the link below for further information about the purpose of this study and exactly what participation in the study will involve. You are in no way obliged to participate by clicking on this link. If you have any questions, please feel free to contact me on (u1622874@uel.ac.uk).

Study link- https://tinyurl.com/y86f284w

Many thanks in advance, Suzy.

Short version for Facebook

Hello, I am carrying out some important research that I hope you can help me with. I am recruiting adults (over 18) who live in the UK and have/have had unusual experiences, unusual beliefs and/or paranoia to participate in an online survey as part of my doctoral degree. Participants have the opportunity to win one of four £25 Love2Shop vouchers. Please follow this link for more information (and please consider sharing). https://tinyurl.com/y86f284w

Short version for Twitter

Hi. I'm carrying out some research that I hope you can help with. I'm recruiting UK adults who have/have had unusual experiences, unusual beliefs and/or paranoia for an online survey. Please follow this link for more info & pls consider sharing- https://tinyurl.com/y86f284

Appendix I: Questionnaires (non-copyright materials only)

Self-Compassion Scale

HOW I TYPICALLY ACT TOWARDS MYSELF IN DIFFICULT TIMES

Please read each statement carefully before answering. To the left of each item, indicate how often you behave in the stated manner, using the following scale:

Almost always				**Almost never**
1	**2**	**3**	**4**	**5**

1. I'm disapproving and judgmental about my own flaws and inadequacies.
2. When I'm feeling down I tend to obsess and fixate on everything that's wrong.
3. When things are going badly for me, I see the difficulties as part of life that everyone goes through.
4. When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world.
5. I try to be loving towards myself when I'm feeling emotional pain.
6. When I fail at something important to me I become consumed by feelings of inadequacy.
7. When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.
8. When times are really difficult, I tend to be tough on myself.
9. When something upsets me I try to keep my emotions in balance.
10. When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.
11. I'm intolerant and impatient towards those aspects of my personality I don't like.
12. When I'm going through a very hard time, I give myself the caring and tenderness I need.
13. When I'm feeling down, I tend to feel like most other people are probably happier than I am.
14. When something painful happens I try to take a balanced view of the situation.
15. I try to see my failings as part of the human condition.
16. When I see aspects of myself that I don't like, I get down on myself.
17. When I fail at something important to me I try to keep things in perspective.18. When I'm really struggling, I tend to feel like other people must be having an easier time of it.
19. I'm kind to myself when I'm experiencing suffering.
20. When something upsets me I get carried away with my feelings.
21. I can be a bit cold-hearted towards myself when I'm experiencing suffering.
22. When I'm feeling down I try to approach my feelings with curiosity and openness.
23. I'm tolerant of my own flaws and inadequacies.
24. When something painful happens I tend to blow the incident out of proportion.
25. When I fail at something that's important to me, I tend to feel alone in my failure.
26. I try to be understanding and patient towards those aspects of my personality I don't like.

Social comparison scale

Please circle a number at a point which best describes the way in which you see yourself in **comparison to others**.

For example:

Short 1 2 3 4 5 6 7 8 9 10 Tall

If you put a mark at 3 this means you see yourself as shorter than others; if you put a mark at 5 (middle) about average; and a mark at 7 somewhat taller.

If you understand the above instructions, please proceed. Circle one number on each line according to how you see yourself in relationship to others.

In relationship to others I feel:

Inferior	1	2	3	4	5	6	7	8	9	10	Superior
Incompetent	1	2	3	4	5	6	7	8	9	10	More competent
Unlikeable	1	2	3	4	5	6	7	8	9	10	More likeable
Left out	1	2	3	4	5	6	7	8	9	10	Accepted
Different	1	2	3	4	5	6	7	8	9	10	Same
Untalented	1	2	3	4	5	6	7	8	9	10	More talented
Weaker	1	2	3	4	5	6	7	8	9	10	Stronger
Unconfident	1	2	3	4	5	6	7	8	9	10	More confident
Undesirable	1	2	3	4	5	6	7	8	9	10	More desirable
Unattractive	1	2	3	4	5	6	7	8	9	10	More attractive
An outsider	1	2	3	4	5	6	7	8	9	10	An insider

Other as shamer scale- 2

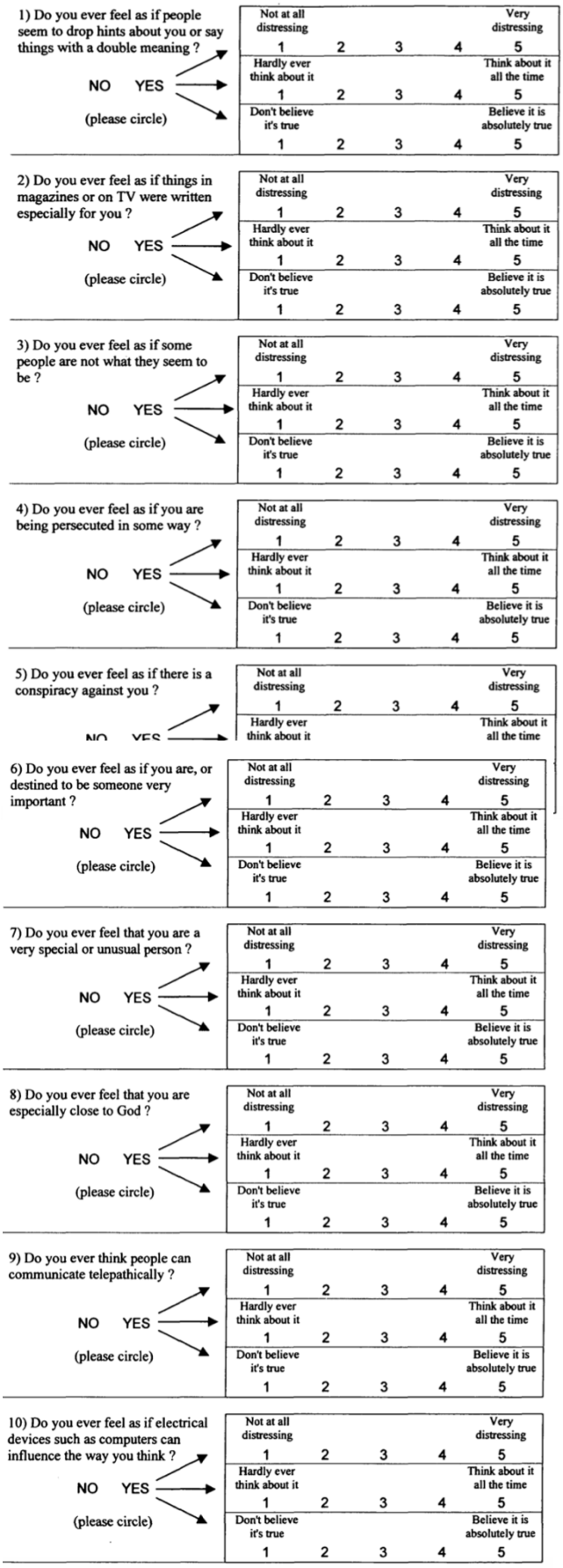
We are interested in how people think others see them. Below is a list of statements describing feelings or experiences about how you may feel other people see you.

Read each statement carefully and circle the number to the right of the item that indicates the frequency with which you find yourself feeling or experiencing what is described in the statement. Use the scale below.

0	**1**	**2**	**3**	**4**
Never	**Seldom**	**Sometime**	**Frequently**	**Almost always**

1. I feel other people see me as not good enough. 0 1 2 3 4
2. I think that other people look down on me 0 1 2 3 4
3. Other people put me down a lot 0 1 2 3 4
4. I feel insecure about others opinions of me 0 1 2 3 4
5. Other people see me as not measuring up to them 0 1 2 3 4
6. Other people see me as small and insignificant 0 1 2 3 4
7. Other people see me as somehow defective as a person 0 1 2 3 4
8. People see me as unimportant compared to others 0 1 2 3 4
9. Other people look for my faults 0 1 2 3 4
10. People see me as striving for perfection but being unable to reach my own standards 0 1 2 3 4
11. I think others are able to see my defects 0 1 2 3 4
12. Others are critical or punishing when I make a mistake 0 1 2 3 4
13. People distance themselves from me when I make mistakes 0 1 2 3 4
14. Other people always remember my mistakes 0 1 2 3 4
15. Others see me as fragile 0 1 2 3 4
16. Others see me as empty and unfulfilled 0 1 2 3 4
17. Others think there is something missing in me 0 1 2 3 4
18. Other people think I have lost control over my body and feelings 0 1 2 3 4

Peters et al., Delusions Inventory



16) Do you ever feel as if you had no thoughts in your head at all ?

NO YES

(please circle)

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time
1	2	3	4	5
Don't believe it's true				Believe it is absolutely true
1	2	3	4	5

17) Do you ever feel as if the world is about to end ?

NO YES

(please circle)

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time
1	2	3	4	5
Don't believe it's true				Believe it is absolutely true
1	2	3	4	5

18) Do your thoughts ever feel alien to you in some way ?

NO YES

(please circle)

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time
1	2	3	4	5
Don't believe it's true				Believe it is absolutely true
1	2	3	4	5

19) Have your thoughts ever been so vivid that you were worried other people would hear them ?

NO YES

(please circle)

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time
1	2	3	4	5
Don't believe it's true				Believe it is absolutely true
1	2	3	4	5

20) Do you ever feel as if your own thoughts were being echoed back to you ?

NO YES

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time

21) Do you ever feel as if you are a robot or zombie without a will of your own ?

NO YES

(please circle)

Not at all distressing				Very distressing
1	2	3	4	5
Hardly ever think about it				Think about it all the time
1	2	3	4	5
Don't believe it's true				Believe it is absolutely true
1	2	3	4	5

Cardiff Anomalous Perceptions Scale

1) Do you ever notice that sounds are much louder than they normally would be ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

2) Do you ever sense the presence of another being, despite being unable to see any evidence ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

3) Do you ever hear your own thoughts repeated or echoed ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

4) Do you ever see shapes, lights or colours even though there is nothing really there ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

5) Do you ever experience unusual burning sensations or other strange feelings in or on your body ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

6) Do you ever hear noises or sounds when there is nothing about to explain them ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

7) Do you ever hear your own thoughts spoken aloud in your head, so that someone near might be able to hear them ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

8) Do you ever detect smells which don't seem to come from your surroundings ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

9) Do you ever have the sensation that your body, or a part of it, is changing or has changed shape ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

10) Do you ever have the sensation that your limbs might not be your own or might not be properly connected to your body?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

11) Do you ever hear voices commenting on what you are thinking or doing ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

12) Do you ever feel that someone is touching you, but when you look nobody is there ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

13) Do you ever hear voices saying words or sentences when there is no-one around that might account for it ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

14) Do you ever experience unexplained tastes in your mouth ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

15) Do you ever find that sensations happen all at once and flood you with information ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

16) Do you ever find that sounds are distorted in strange or unusual ways ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

17) Do you ever have difficulty distinguishing one sensation from another ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

18) Do you ever smell everyday odours and think that they are unusually strong ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

19) Do you ever find the appearance of things or people seems to change in a puzzling way, e.g. distorted shapes or sizes or colour ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

20) Do you ever find that your skin is more sensitive to touch, heat or cold than usual ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

21) Do you ever think that food or drink tastes much stronger than it normally would ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

22) Do you ever look in the mirror and think that your face seems different from usual ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

23) Do you ever have days where lights or colours seem brighter or more intense than usual ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

24) Do you ever have the feeling that of being uplifted, as if driving or rolling over a road while sitting quietly ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

25) Do you ever find that common smells sometimes seem unusually different ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

26) Do you ever think that everyday things look abnormal to you ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

27) Do you ever find that your experience of time changes dramatically ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

28) Have you ever heard two or more unexplained voices talking with each other ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

29) Do you ever notice smells or odours that people next to you seem unaware of ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

30) Do you ever notice that food or drink seems to have an unusual taste ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

31) Do you ever see things that other people cannot ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

32) Do you ever hear sounds or music that people near you don't hear ?

NO YES

If YES please rate on right hand side.

Not at all distressing					Very distressing
1	2	3	4	5	
Not at all distracting					Completely intrusive
1	2	3	4	5	
Happens hardly at all					Happens all the time
1	2	3	4	5	

Centrality of Event Scale-S

1. I feel that this event has become part of my identity.	totally disagree 1 2 3 4 5 totally agree
2. This event has become a reference point for the way I understand myself and the world.	totally disagree 1 2 3 4 5 totally agree
3. I feel that this event has become a central part of my life story.	totally disagree 1 2 3 4 5 totally agree
4. This event has colored the way I think and feel about other experiences	totally disagree 1 2 3 4 5 totally agree
5. This event permanently changed my life.	totally disagree 1 2 3 4 5 totally agree
6. I often think about the effects this event will have on my future.	totally disagree 1 2 3 4 5 totally agree
7. This event was a turning point in my life.	totally disagree 1 2 3 4 5 totally agree

Impact of Events Scale- Revised

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Appendix J: Demographic and personal information requested

What is your age?

- Drop down box with
    - 18-24
    - 25-29
    - 30-34
    - 35-39
    - 40-44
    - 45-49
    - 50-54
    - 55-59
    - >60

What is your gender?

- Male
- Female
- Other- please specify

How would you describe your ethnic origin? Please click the option you feel is most relevant to you.

- White English/Welsh/Scottish/Northern Irish/British
- White Irish
- Any other White background. Please specify:
- Indian
- Pakistani
- Bangladeshi
- Chinese
- Asian and White
- Any other Asian background. Please specify:
- African
- Caribbean
- Black African and White
- Black Caribbean and White
- Any other Black/African/Caribbean background. Please specify:
- Arab
- Any other ethnic group. Please specify:

Have you ever received a mental health diagnosis (e.g., psychosis/schizophrenia, depression)?

- Yes
- No

Have you ever experienced, or do you currently experience mental health difficulties (but have not received a mental health diagnosis)?

- Yes
- No

What diagnosis/diagnoses have you received or how would you describe your mental health difficulties?

- Depression
- Anxiety (including OCD, phobias, PTSD)
- Psychosis
- Schizophrenia
- Schizoaffective Disorder
- Bipolar
- Personality Disorder
- Other. Please specify/describe:

When did you receive the diagnosis or when did you start experiencing these difficulties?

- < 6 months ago
- 6-12 months ago
- 1-2 years ago
- 2-4 years ago
- 4-6 years ago
- 6-8 years ago
- 8-10 years ago
- > 10 years ago

Have you in the past, or are you currently experiencing any psychological distress for which you have/are receiving professional support (i.e. talking therapy and/or medication)?

- Yes currently
- Yes, in the past
- No

Appendix K: Modified instructions from the Shame Experiences Interview – priming for shame memory

The experience of shame is common among all human beings and everyone, throughout life, has shame experiences. We know now that these are important experiences that might be related to several problems in people's lives

Shame is a negative self-conscious emotion associated with feeling inferior to others and devaluing yourself. Shame may involve different feelings and thoughts:

External shame is what we feel when we experience or think someone/others are being critical, hostile, looking down on us, or seeing us as inferior, inadequate, different, bad or weak; is what we feel when others criticise, reject, exclude or abuse us. Our feelings rise from how we think others feel about us.

Internal shame is what we feel when we feel or judge ourselves negatively, as inferior, inadequate, different, bad or weak. Our feelings rise from how we feel and think about ourselves. Sometimes, we can also feel humiliation, when we believe others are being bad or unfair to us, we feel anger and want revenge/to get back at them. Shame feelings may blend with other feelings, such as anxiety, fear, anger, disgust or contempt. Furthermore, a great urge to hide, disappear or run away from the situation is part of the experience of shame.

In a certain situation we might feel external shame, internal shame or both.

Here are some examples of situations involving attachment figures that were experienced as shameful during childhood and adolescence.

For example, Maya *(changed from Maggie)*, who is 7 years old and has freckles, feels shame when at school some kids call her names (e.g., "dot face"), because she believes she is different from the other kids and that they saw her as flawed and inferior in some way. So, she thinks she is not, and cannot, be accepted by them and that they do not want to be her friends. Whenever she has to play with them, she wants to run away from the playground or hide.

Another example is Jay *(changed from John)*, 9 years old, who is well behaved at school, has good marks, tries to concentrate in classes and does his homework every day. However, every time he makes a mistake, or he gets a worse mark on a test, his father is very critical and tells him he will never be someone in life and he is a disappointment. Whenever this happens, John feels extremely sad, ashamed and thinks he is unable to meet others expectations.

Another example is Philip, 15 years old, who has never liked to play football, because he believed he was too clumsy to play sports. During a match between classes, he stumbled on the ball and the other team scored. Then, Philip felt very ashamed, and saw himself as inadequate and incompetent, different from his peers. Even though his classmates didn't make any negative remarks, he couldn't help thinking they had seen him as inadequate and inferior, and so they could reject him in some way. At that moment, Philip felt himself blushing, he felt nervous and tense, and wished he could become invisible and disappear from the face of the earth. At the end of the game he ran home and swore not to play football ever again.

(Added for the purposes of this study:)

Now, please try to remember **one** situation or experience during your childhood and/or adolescence that you find significant and where you felt shame involving an attachment figure.

An attachment figure can be defined as an important person in your childhood and/or adolescence who has been involved in your caregiving and/or played a significant role in your life (e.g. parent, grandparent, uncle, teacher).

Appendix L: Attachment figure options

Please choose from the options below which attachment figure featured in your shame memory:

- Parent
- Grandparent
- Aunt/Uncle
- Sibling
- Cousin
- Friend
- Partner
- Teacher
- Other- please specify

Appendix M: Elaborated categories of shaming experiences from the SEI

1. Criticism by an attachment figure (e.g. putting down, making fun, belittling, rejection etc.).
2. Exposure of perceived negative personal attributes/characteristics/behaviour to others (e.g. being shown to display fussy, sulky, gossipy, sneaky, vain, greedy etc. behaviour).
3. Negative comments about the body, weight, bodily shape or physical appearance (e.g. teasing for having freckles or being overweight etc.).
4. Comparisons with significant others (e.g. brothers, cousins, friends etc.).
5. Physical abuse (e.g. scratching, punching, slapping, biting, strangling, kicking etc.).
6. Shame of personal habits (e.g. clothes, hygiene, social interaction etc.).
7. Sexual abuse (e.g. sexual touching clothed or unclothed, showing children pornography etc.).
8. Emotional/psychological abuse (e.g. deliberately trying to scare or humiliate a child, isolating/ ignoring them etc.).
9. Reflected shame (e.g. shame of an attachment figure's embarrassing behaviour/attributes).
10. Shame of family status (e.g. being rich/poor, having unemployment, divorce, criminal activity etc. in the family etc.)

Appendix N: Instructions for the questionnaire measures

Following the procedure of Pinto-Gouveia and Matos (2011), this study used the following instructions:

The Impact of Event Scale Revised

‘Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you over the past seven days with respect to the significant situation or experience in which you think you felt shame, during your childhood and/or adolescence.’

Centrality of Event Scale

‘Please think back upon that significant situation or experience in which you think you felt shame during your childhood and/or adolescence and answer the following questions.’

Appendix O: Summary of study results for participants

Participant Feedback

Researcher: Suzy Lechler
Email: u1622874@uel.ac.uk

You participated in a research study between September 2018 and March 2019, which was aimed at exploring the relationship between shame and unusual experiences, beliefs and paranoia, and the distress these cause.

Thank you for your participation in this valuable research. I am writing to you as you requested to receive a summary of the results.

Demographic information

35 participants completed all questionnaires in the study:

- 94% of respondents identified their ethnic background as White, 3% as Pakistani, and 3% identified as being from an Asian background.
- The average age of respondents was 30 years-old.

Main findings

The aim of the study was to explore the relationship between past experiences of shame on current feelings of shame and how this may relate to the nature of unusual experiences, beliefs and paranoia, and their associated distress. The following results correspond to an average for all participants involved in the study. It is important to acknowledge that individual experiences varied.

External shame: On average, participants in the study reported levels of external shame that were higher than has been reported in previous studies involving participants from universities and communities, and by those reported in previous research involving participants who had received a diagnosis of psychosis. This suggests that there were relatively high levels of external shame experienced by participants in this study.

Internal shame: On average, participants in the study reported levels of internal shame that were lower than those reported in previous studies involving participants from universities, yet higher than has been reported in studies involving participants who had received a mental health diagnosis. This suggests that there was a degree of heightened internal shame experienced by participants in this study.

Shame memories and unusual beliefs, experiences and paranoia: A key finding from this study was that the nature of shame memories predicts the distress that is experienced in relation to unusual beliefs, experiences and paranoia. This was particularly the case for participants whose shame memory was experienced as traumatic (i.e., thinking about it when not meaning to, feeling jumpy and easily startled due to the memory, trying to avoid thinking about it).

Shame memories and shame: The study also found that traumatic shame memories predict external shame. This means that if your shame memory is experienced as traumatic, you

may be more likely to experience external shame. Another key finding was that internal shame heightened the relationship found between traumatic shame memories and distress related to unusual beliefs, experiences and paranoia.

Self-compassion: On average, participants in the study reported 'moderate' levels of self-compassion. Self-compassion was found to be associated with internal shame. This means that self-compassion may help to reduce feelings of internal shame. However, further research is needed to examine this relationship in more detail.

Recommendations from the findings

Whilst unusual experiences, beliefs and paranoia can be comforting, inspiring and harmless for many, they can cause significant distress for some individuals.

The findings highlighted the importance of attending to shame memories within psychological therapy, especially for individuals experiencing distress associated with unusual beliefs, experiences or paranoia. It may be particularly helpful to explore whether shame memories are experienced as traumatic, due to the finding that these were a significant predictor of external shame and the distress associated with unusual beliefs, experiences and paranoia.

The findings of this study also suggested that therapeutic interventions should focus on reducing levels of external and internal shame when working with individuals who have distressing unusual beliefs, experiences and paranoia.

It may be clinically useful to adapt widely used therapies for these experiences (such as cognitive-behavioural therapy; CBT) to attend to beliefs and feelings of shame. Although evidence of efficacy is currently lacking, cognitive-analytic therapy may also be helpful in addressing difficulties associated with internal shame due to its focus on interpersonal processes. The significant association between self-compassion and internal shame suggests that increasing self-compassion may be beneficial for individuals who have unusual beliefs, experiences and paranoia, and experience internal shame. Given that Compassion Focused Therapy has been used effectively with individuals with psychosis and in reducing shame, this is also likely to be a helpful approach.

The role of society in the development of shame must also be acknowledged. Community interventions directed at the wider societal level may help reduce levels of shame in individuals who have these experiences and could also address the social stigma and marginalisation by others in society, which has been shown to contribute to shame. The significant relationships between SMs and psychotic-type experiences, their associated distress, and levels of internal and external shame, indicate the crucial importance of preventative work in reducing the prevalence of such shaming experiences.

Public health initiatives have highlighted the association between adverse childhood experiences and distress in adulthood. This has led to an increase in preventative interventions to support parents and families, alongside public health approaches to tackle stigma. The findings in this study supported the influence of adverse childhood experiences on the experience of distress in adulthood, and therefore contribute further support for such initiatives.

I would like to thank you again for participating in this study. If you have any queries or comments, please do not hesitate to contact me on the email address above.

If you have experienced any distress whilst reading these results, please use the 'sources of support' found below:

1) **Your General Practitioner** (GP)
2) **Hearing Voices Network** - an organisation that offers information, support and understanding to people who hear voices and those who support them. Contact number- 0114 271 8210 Email- nhvn@hotmail.co.uk to find out what support is available in your area, or to join their online forum.
3) **Mind** - provides information and support about mental health problems from 9am-6pm Monday-Friday. Contact number- 0300 123 3393 Website-www.mind.org.uk
4) **Sane** - provides a national out-of-hours helpline (from 6pm-11pm) for individuals experiencing distress. Contact number- 0300 304 7000 Website-www.sane.org.uk
5) **Samaritans** - A 24-hour confidential helpline that is open 365 days a year. Contact number- 116 123 (UK) Email jo@samaritans.org

In an emergency please call for an ambulance or go to your nearest A&E department

Best wishes,

Suzy Lechler.

Appendix P: Cronbach's α for each measure

Measure	Cronbach's α
IES-R Total	.95
CES-S Total	.91
AMQ- Reliving	.91
AMQ - Hear	.91
AMQ - See	.91
AMQ - Talk	.91
AMQ - Emotion	.91
AMQ - Setting	.91
AMQ - Remember/know	.91
AMQ - In words	.91
AMQ - Subject	.91
AMQ - Story	.91
AMQ - Message/anchor	.91
OAS Total	.93
SCS Total	.91
CAPS Total	.98
CAPS Distress	.97
CAPS Intrusiveness	.96
CAPS Frequency	.97
PDI Total	.97
PDI Distress	.94
PDI Preoccupation	.95
PDI Conviction	.93
PC Total	.98
PC Frequency	.95
PC Conviction	.95
PC Distress	.95
S-cS Total	.92

Appendix Q: Bivariate correlations without the outlier

Variables	IES-R	CES	OAS	SCS	CAPS_T	CAPS_D	CAPS_I	CAPS_F	PDI_T	PDI_D	PDI_P	PDI_C	PC_T	PC_F	PC_C	PC_D	S-cS
IES-R	1																
CES-S	.54**	1															
CI	.25 - .76																
OAS	.56**	.42*	1														
CI	.31 - .75	.10 - .67															
SCS	-.39*	-.41*	-.60**	1													
CI	-.63 - -.09	-.69 - -.05	-.79 - .33														
CAPS_T	.57**	.59**	.49**	-.56**	1												
CI	.27 - .76	.31 - .77	.25 - .69	-.75 - -.36													
CAPS_D	.58**	.57**	.45**	-.55**	.97**	1											
CI	.25 - .77	.26 - .75	.21 - .67	-.73 - -.36	.93 - .99												
CAPS_I	.56**	.56**	.45**	-.55**	.99**	.99**	1										
CI	.24 - .76	.24 - .75	.20 - .67	-.73 - -.35	.97 - .99	.98 - 1.0											
CAPS_F	.65**	.59**	.45**	-.52**	.96**	.98**	.97**	1									
CI	.41 - .80	.34 - .75	.23 - .66	-.73 - -.28	.90 - .98	.93 - .99	.90 - .99										
PDI_T	.53**	.62**	.50**	-.53**	.78**	.77**	.76**	.77**	1								
CI	.23 - .74	.33 - .77	.27 - .68	-.75 - -.26	.54 - .90	.48 - .90	.47 - .89	.46 - .91									
PDI_D	.60**	.62**	.49**	-.57**	.85**	.87**	.86**	.88**	.93**	1							
CI	.35 - .78	.43 - .74	.23 - .67	-.75 - -.33	.67 - .93	.69 - .95	.65 - .94	.67 - .95	.84 - .98								

PDI_P	.65**	.61**	.47**	-.53**	.86**	.89**	.87**	.91**	.93**	.98**	1						
CI	.44 - .80	.41 - .74	.23 - .66	-.73 - .30	.68 - .93	.73 - .95	.67 - .95	.74 - .96	.81 - .98	.95 - .99							
PDI_C	.62**	.56**	.51**	-.56**	.82**	.83**	.81**	.86**	.95**	.97**	.98**	1					
CI	.38 - .78	.32 - .71	.28 - .69	-.75 - -.36	.62 - .92	.61 - .93	57 - .92	.63 - .94	.88 - .99	.92 - .99	.93 - .99						
PC_T	.51**	.52**	.74**	-.57**	.67**	.68**	.67**	.67**	.66**	.77**	.71**	.72**	1				
CI	.14 - .74	.22 - .73	.58 - .87	-.79 - -.25	.38 - .83	.38 - .83	.36 - .83	.36 - .84	.37 - .81	.58 - .88	.47 - .85	.47 - .86					
PC_F	.52**	.58**	.72**	-.57**	.73**	.72**	.73**	.72**	.68**	.73**	.71**	.71**	.92**	1			
CI	.15 - .76	.25 - .78	.54 - .86	-.76 - -.30	.50 - .86	.48 - .86	.48 - .86	.49 - .85	.37 - .84	.52 - .85	.46 - .85	.43 - .84	.80 - .98				
PC_C	.52**	.51**	.68**	-.52**	.66**	.67**	.66**	.66**	.67**	.74**	.71**	.72**	.97**	.87**	1		
CI	.17 - 77	.15 - .74	.45 - .85	-.74 - .20	.35 - .84	.37 - .84	.37 - .84	.35 - .84	.38 - .84	.52 - .87	.51 - .85	.49 - .85	.93 - .99	.68 - .97			
PC_D	.48**	.48**	.67**	-.55**	.63**	.65**	.64**	.62**	.62**	.72**	.70**	.69**	.95**	.82**	.93**	1	
CI	.09 - .76	.09 - .73	.41 - .84	-.76 - -.28	.30 - .83	.36 - .83	.32 - .83	.26 - .83	.29 - .81	.50 - .86	.47 - .85	.45 - .84	.91 - .98	.61 - .94	.85 - .97		
S-cS	.30	.53**	.32	-.17	.56**	.49**	.52**	.51**	.47**	.46**	.47**	.43*	.41*	.47**	.39*	.46**	1
CI	-.07 - .57	.26 - .73	-.05 - .62	-.46 - .16	.18 - .78	.04 - .75	.10 - .76	.08 - .76	.10 - .73	.03 - .77	.03 - .76	.00 - .72	.08 - .67	.14 - .73	.06 - .65	.14 - .71	

** Correlation significant at the 0.01 level. * Correlation significant at the 0.05 level.

Note. IES-R = Impact of event, CES-S= Centrality event, CAPS_T = Cardiff Anomalous Experiences Total, CAPS_D = Distress subscale, CAPS_I = Intrusiveness subscale, CAPS_F = Frequency subscale, PDI_T = Peters et al Delusions Inventory Total, PDI_D= Distress subscale, PDI_P = Preoccupation Subscale, PDI_C = Conviction subscale, PC = Paranoia Checklist, PC_F= Frequency subscale, PC_C= Conviction subscale, PC_D= Distress subscale, PC_T= S-cS = Self-compassion Scale

Appendix R: Normal distribution plots for the questionnaires

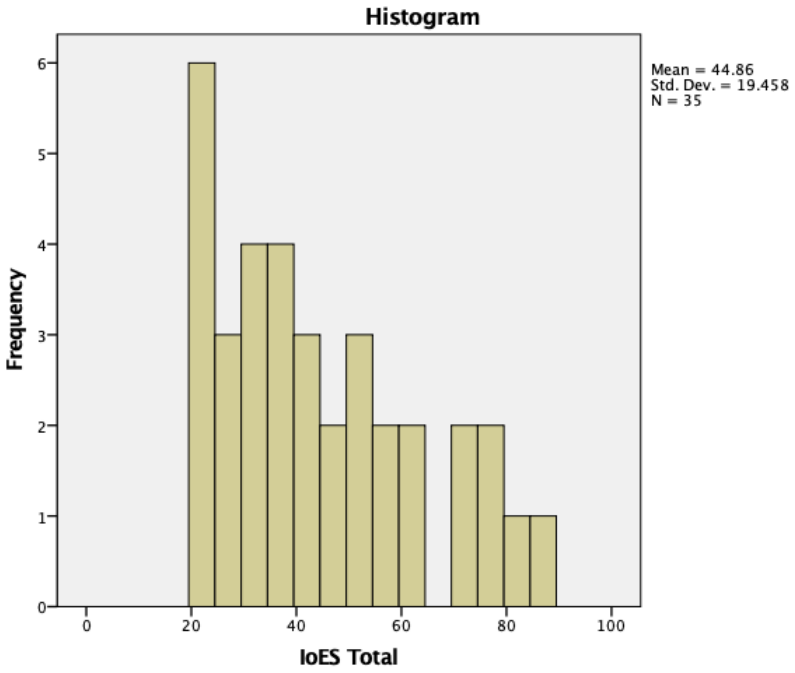


Figure R1. Histogram for the Impact of Events Scale-Revised (IES-R)

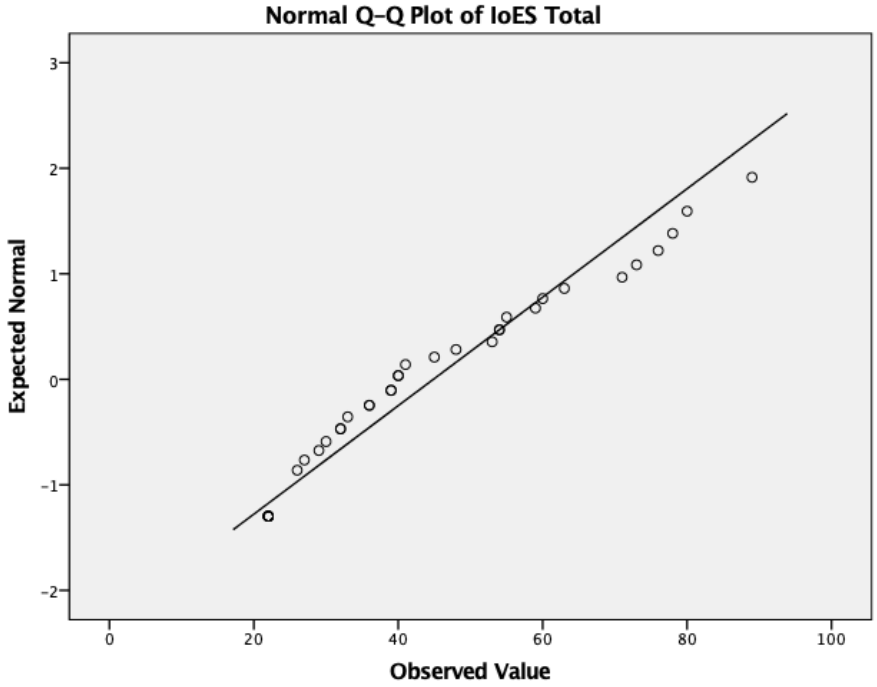


Figure R2. Q-Q plot for the Impact of Events Scale-Revised (IES-R)

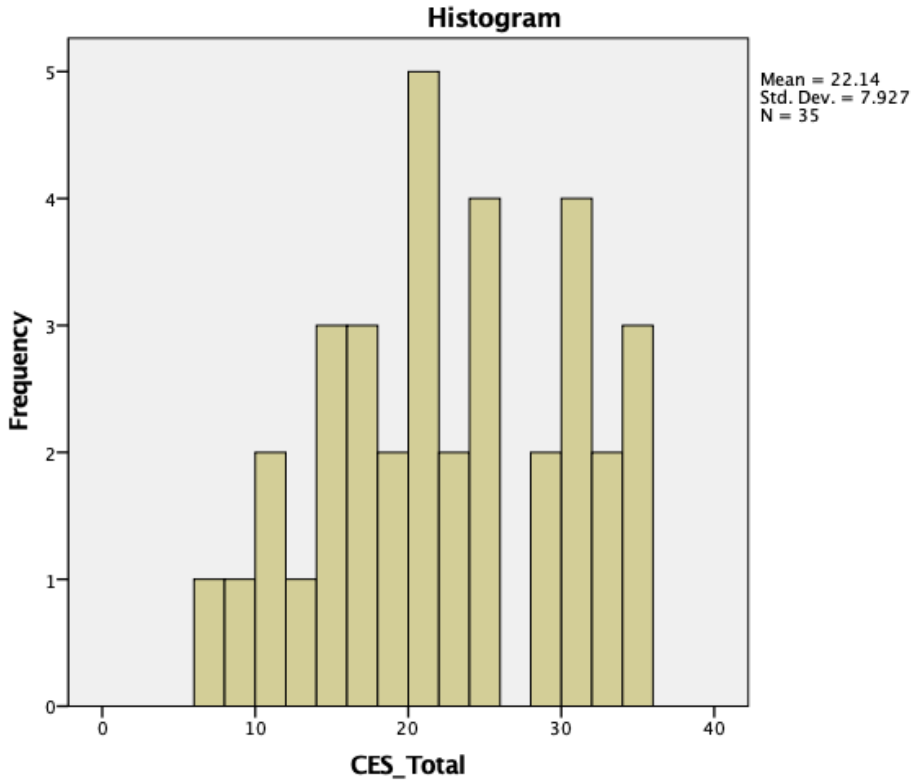


Figure R3. Histogram for the Centrality of Events Scale – Short Version (CES-S)

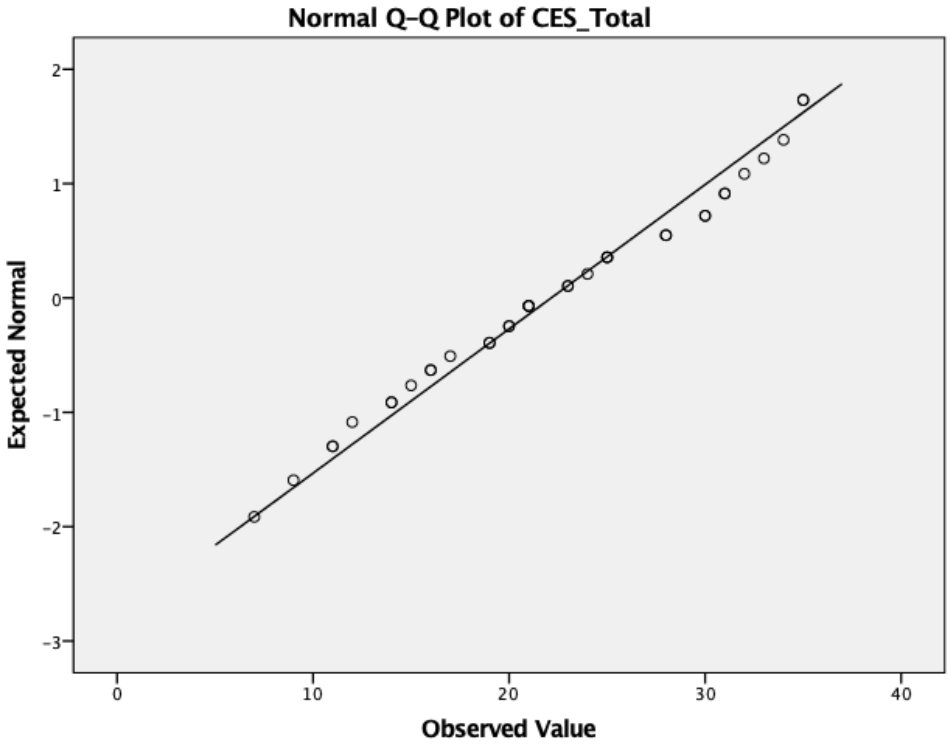


Figure R4. Q-Q plot for the Centrality of Events Scale – Short Version (CES-S)

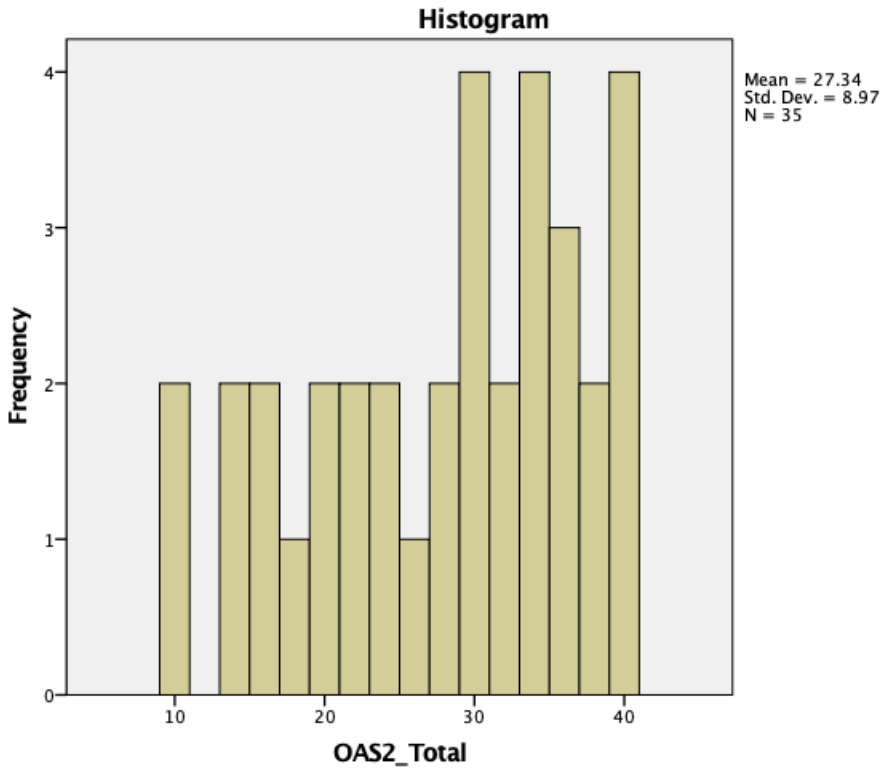


Figure R5. Histogram for the Other as Shamer Scale – 2 (OAS-2)

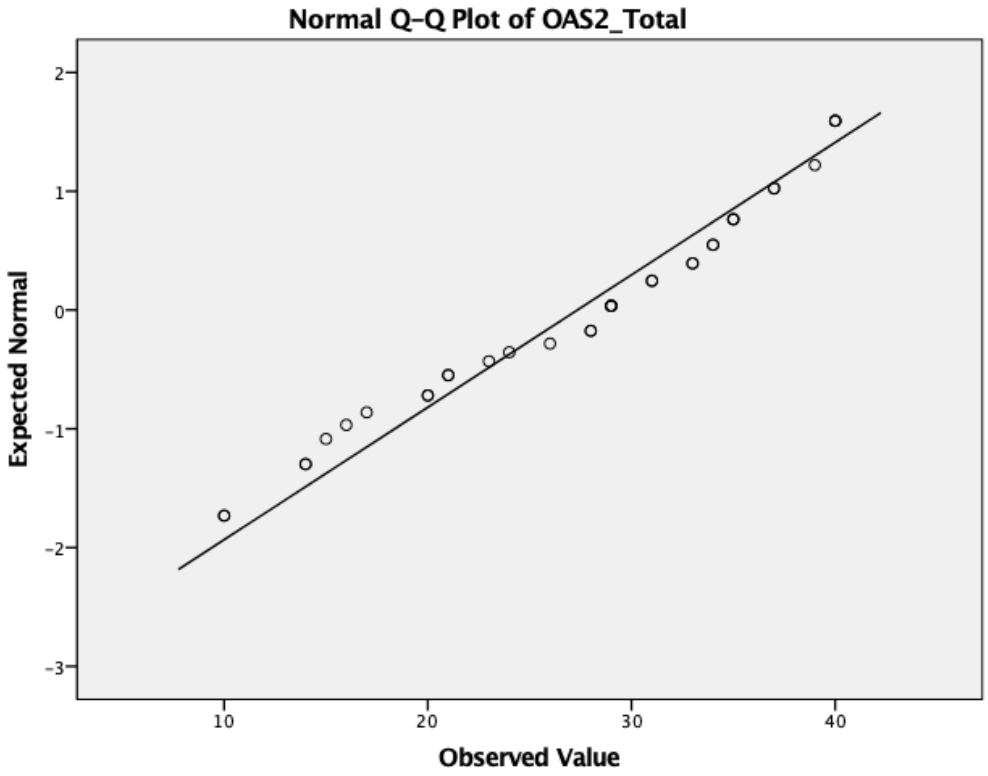


Figure R6. Q-Q plot for the Other as Shamer Scale – 2 (OAS-2)

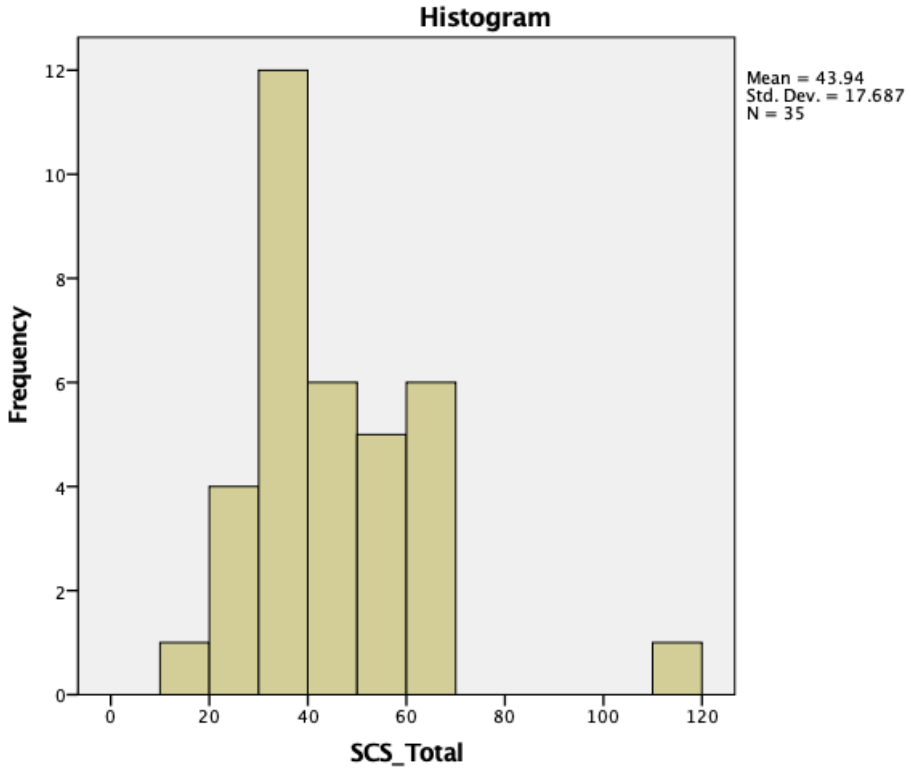


Figure R7. Histogram for the Social Comparison Scale (SCS)

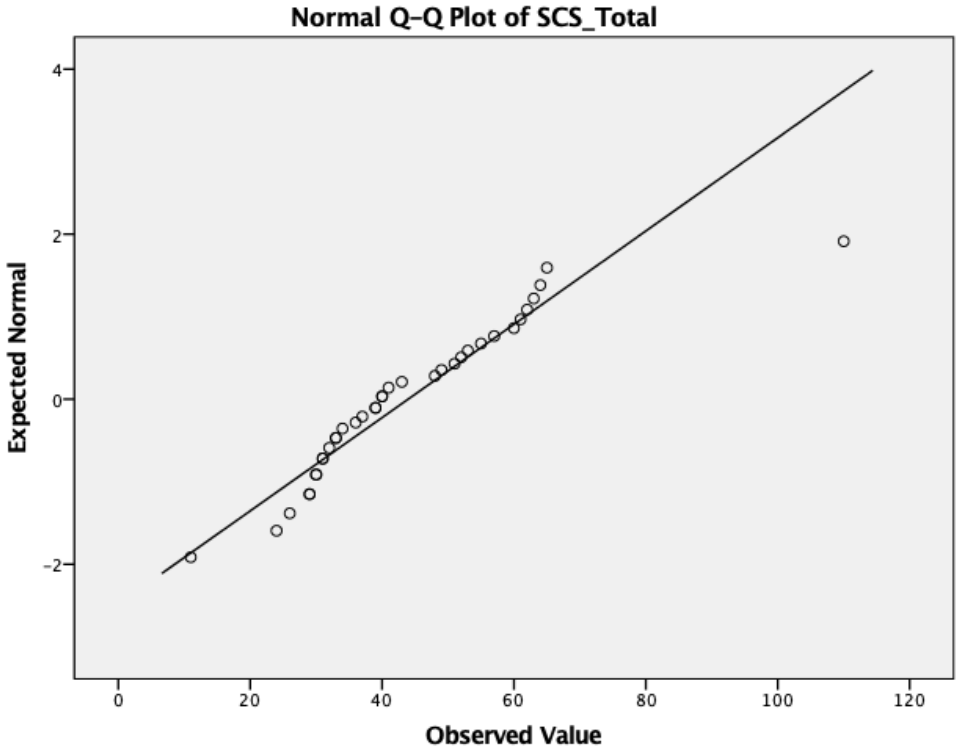


Figure R8. Q-Q plot for the Social Comparison Scale (SCS)

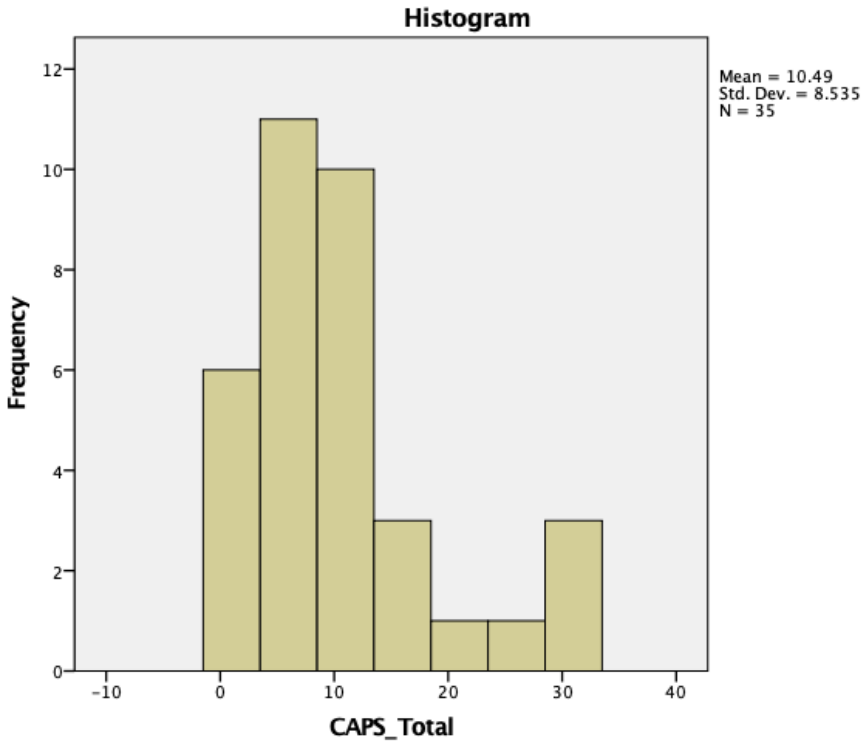


Figure R9. Histogram for the Cardiff Anomalous Perceptions Scale (CAPS) Total

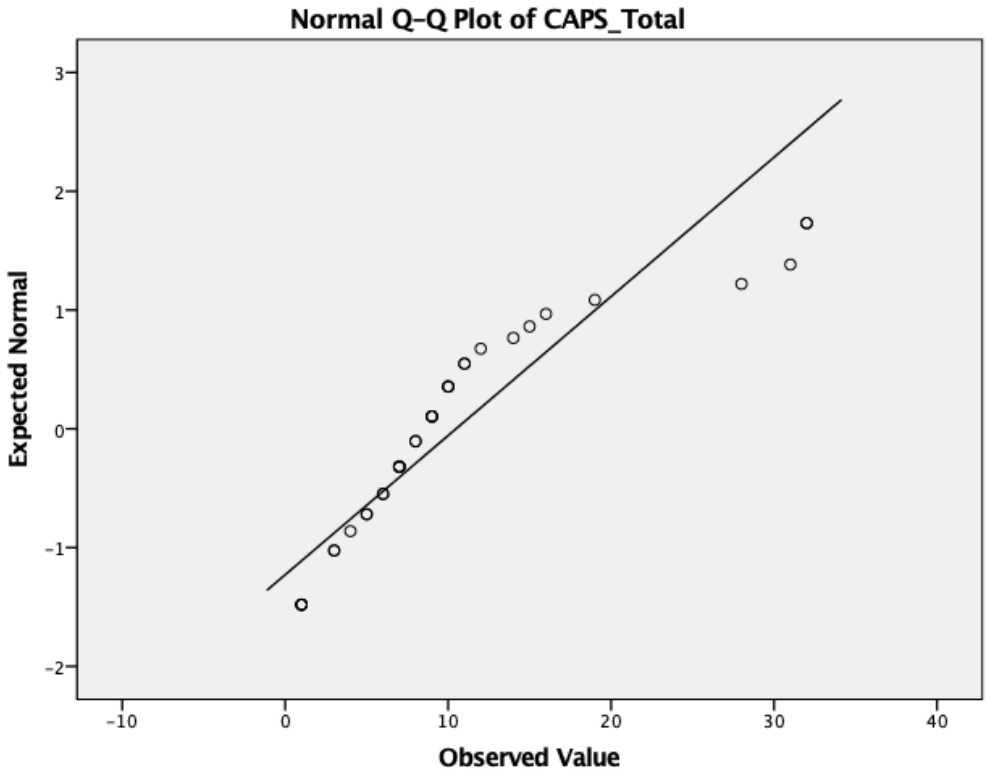


Figure R10. Q-Q plot for the Cardiff Anomalous Perceptions Scale (CAPS) Total

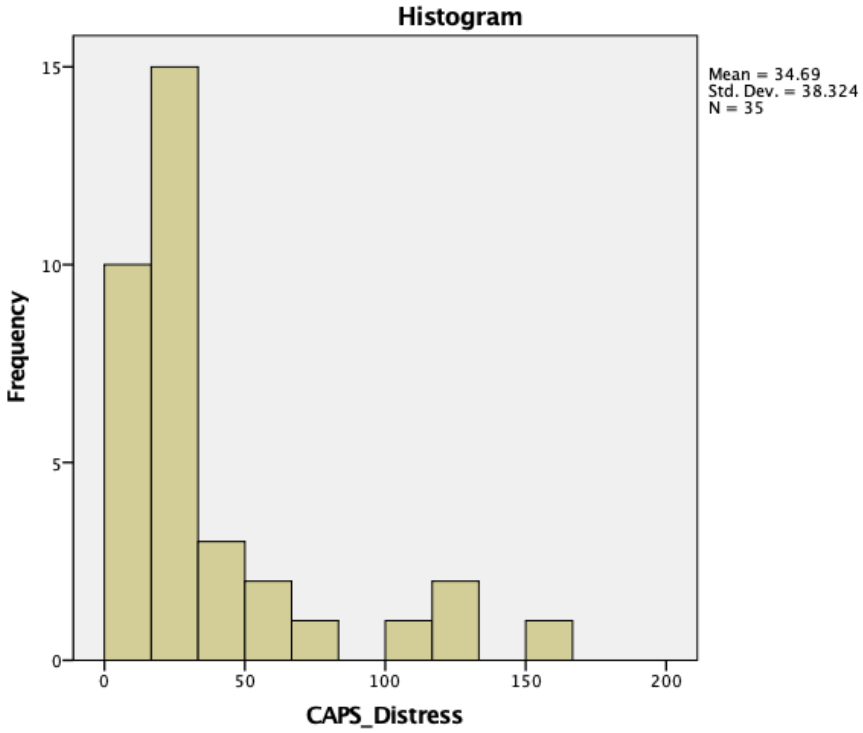


Figure R11. Histogram for the CAPS Distress subscale

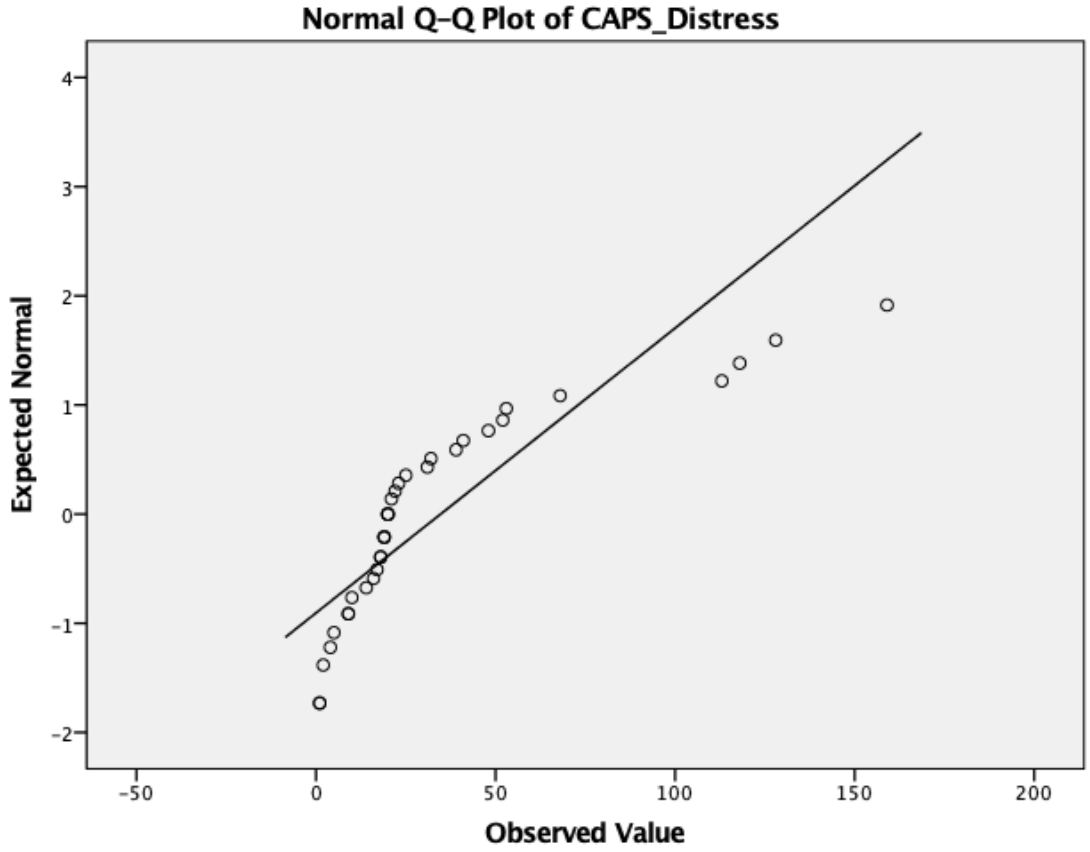


Figure R12. Q-Q plot for the CAPS Distress subscale

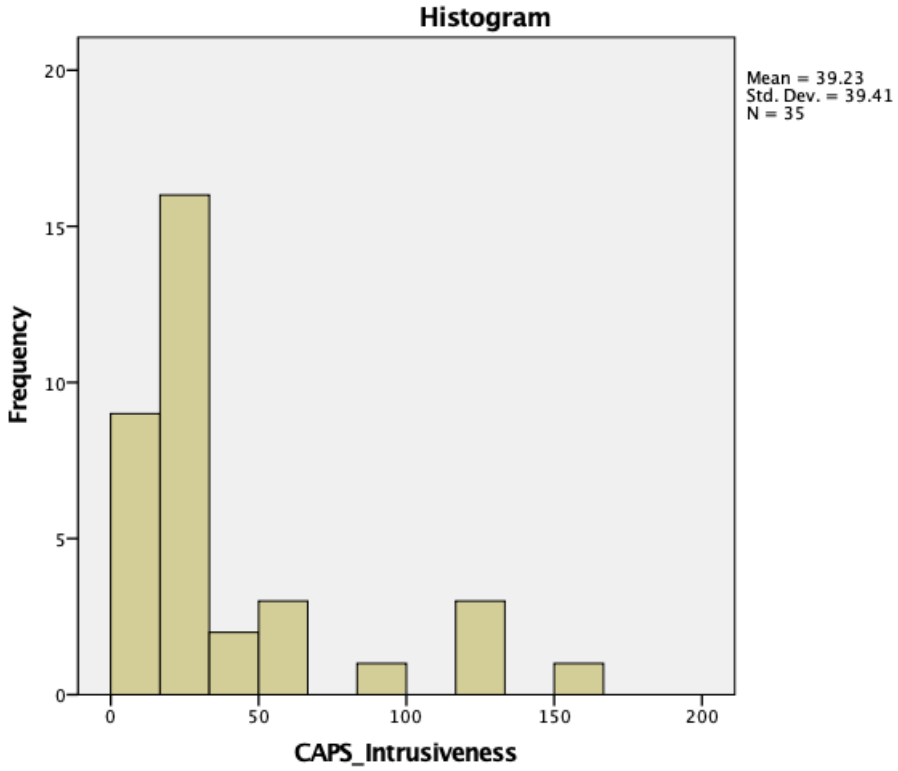


Figure R13. Histogram for the CAPS Intrusiveness subscale

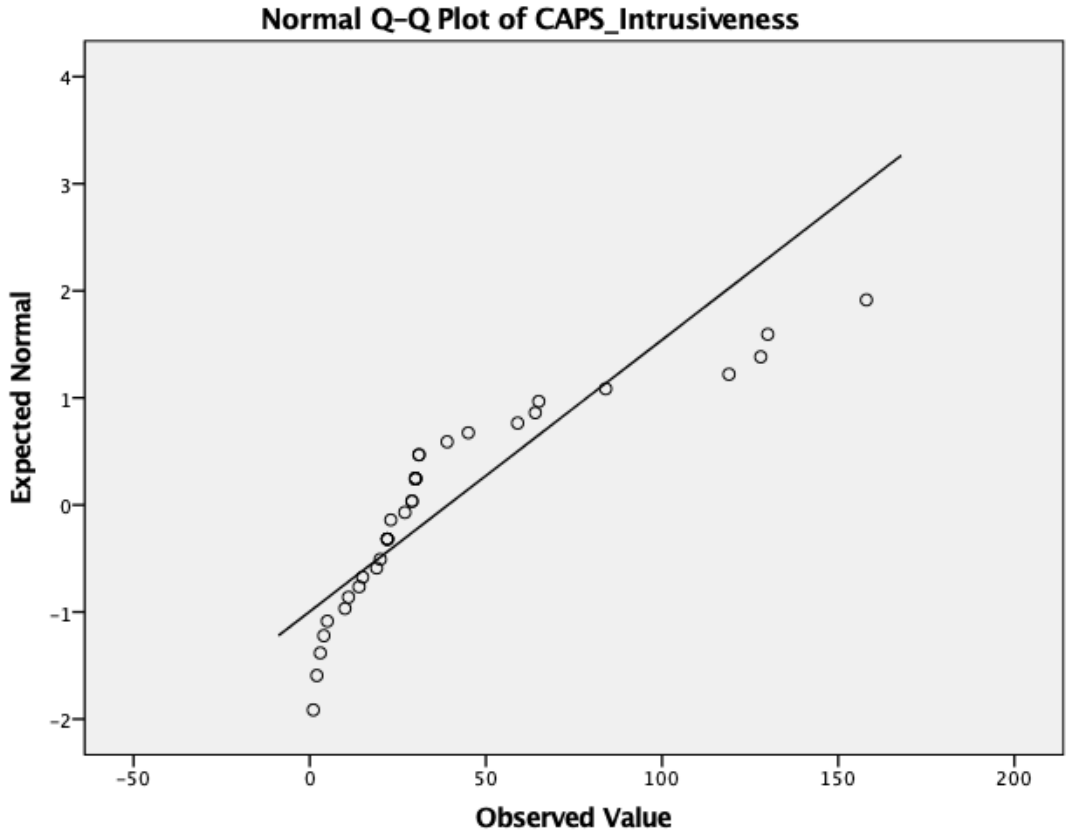


Figure R14. Q-Q plot for the CAPS Intrusiveness subscale

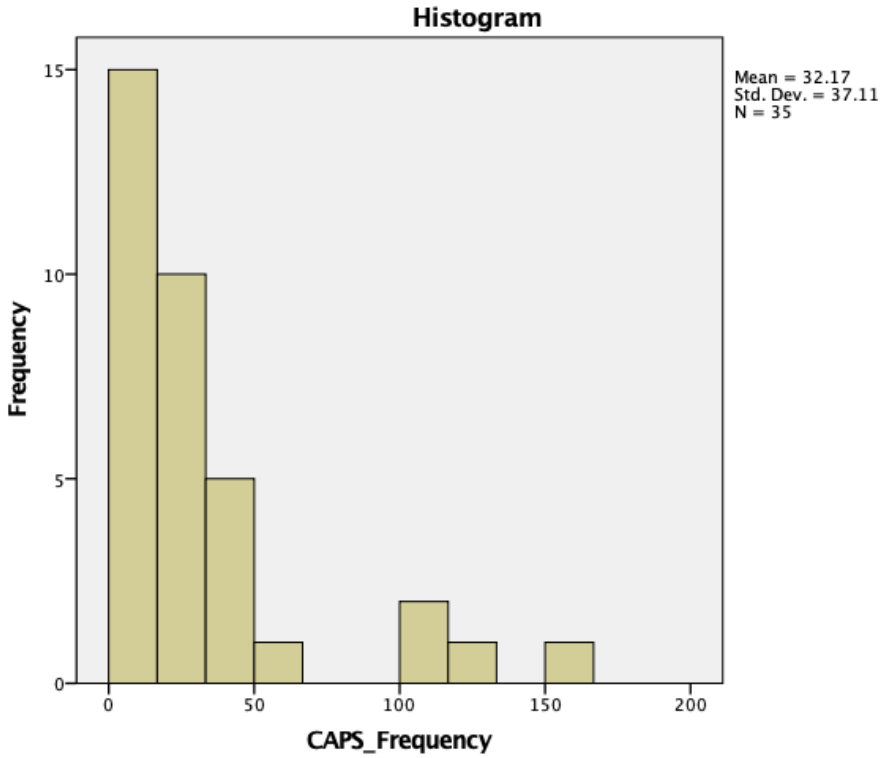


Figure R15. Histogram for the CAPS Frequency subscale

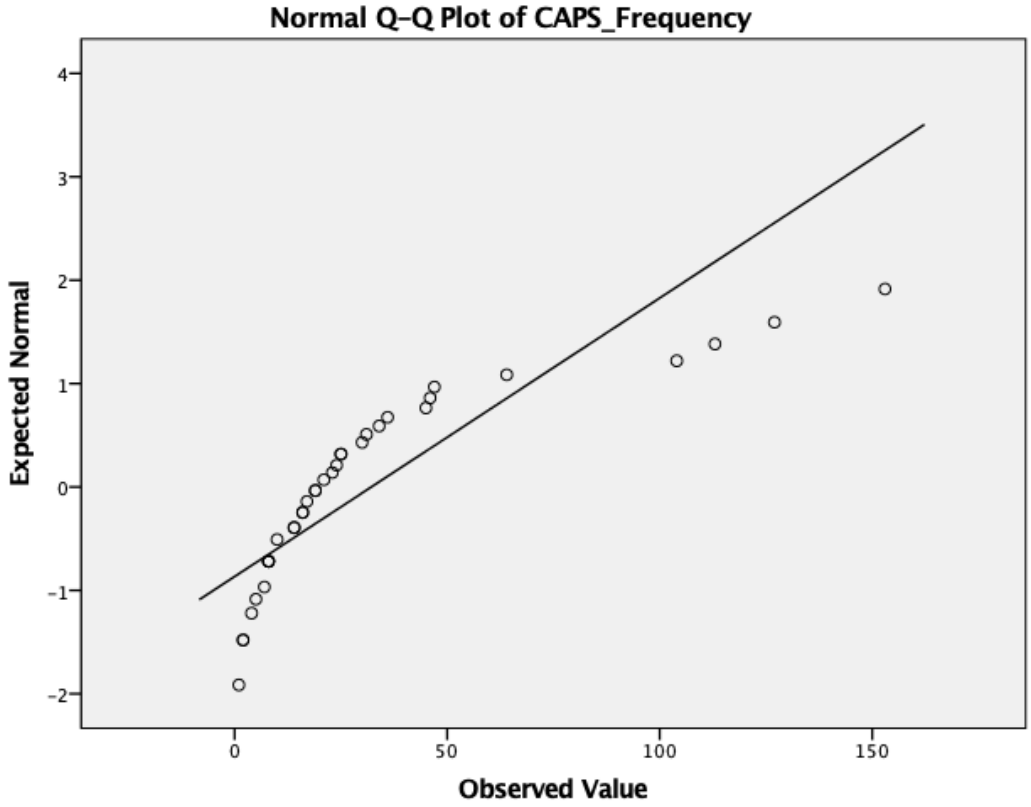


Figure R16. Q-Q plot for the CAPS Frequency subscale

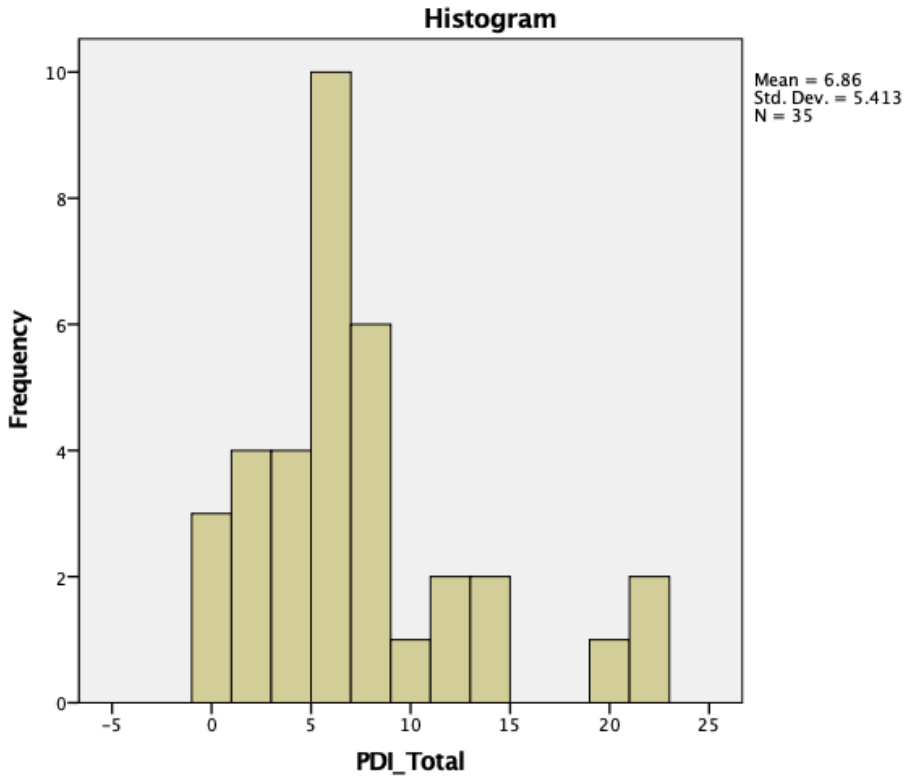


Figure R17. Histogram for the Peters et al Delusions Inventory (PDI) Total

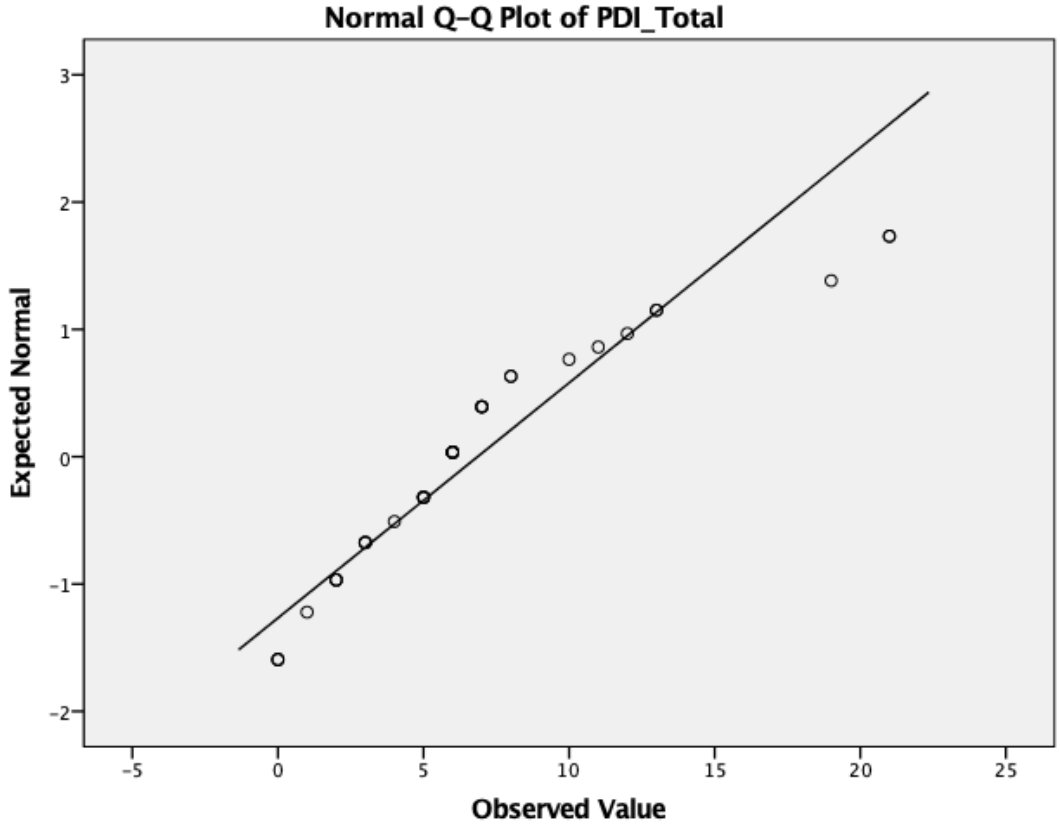


Figure R18. Q-Q plot for the Peters et al Delusions Inventory (PDI) Total

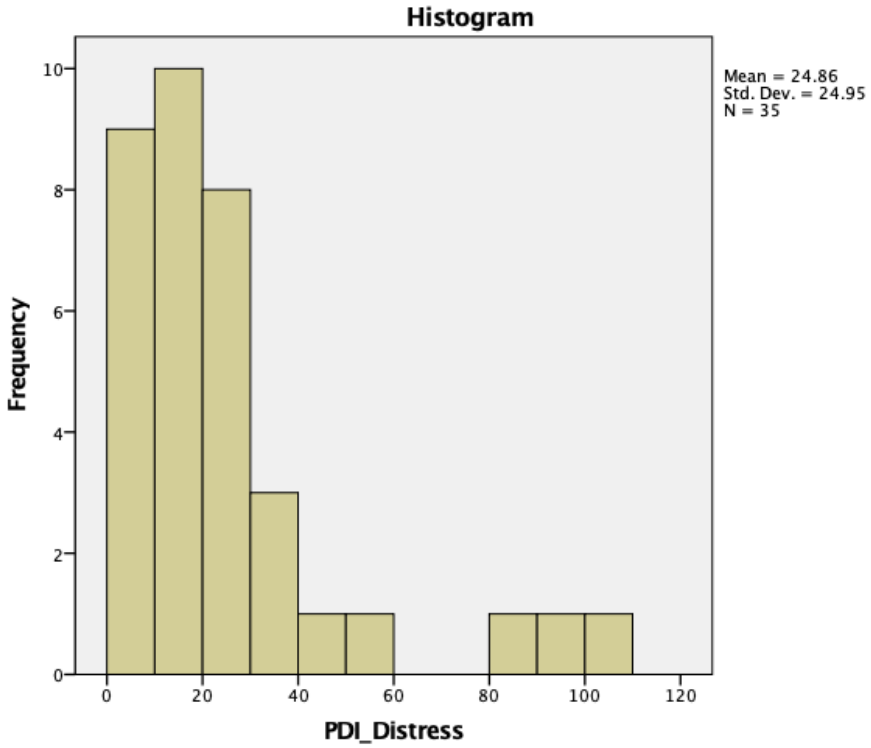


Figure R19. Histogram for the PDI Distress subscale

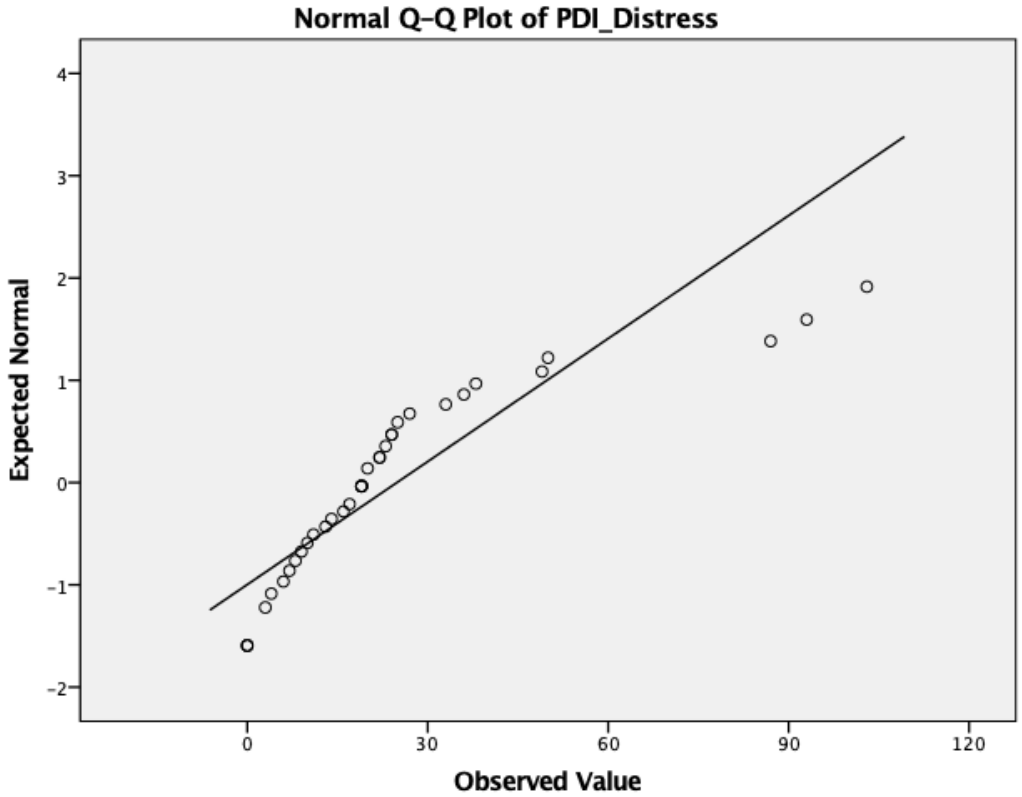


Figure R20. Q-Q plot for the PDI Distress subscale

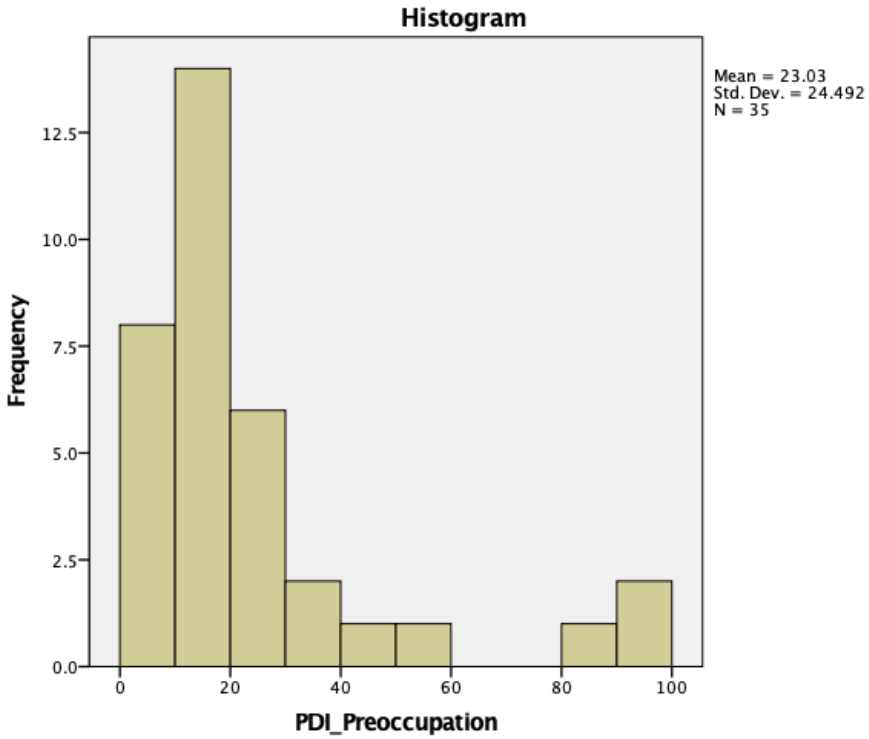


Figure R21. Histogram for the PDI Preoccupation subscale

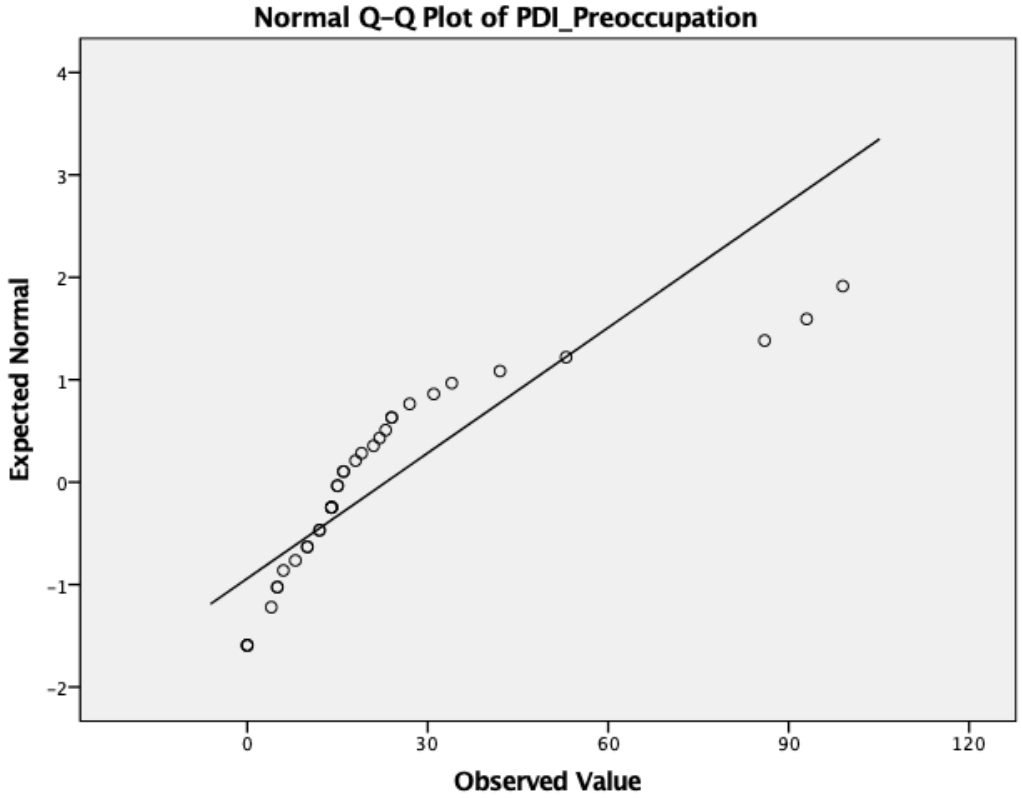


Figure R22. Q-Q plot for the PDI Preoccupation subscale

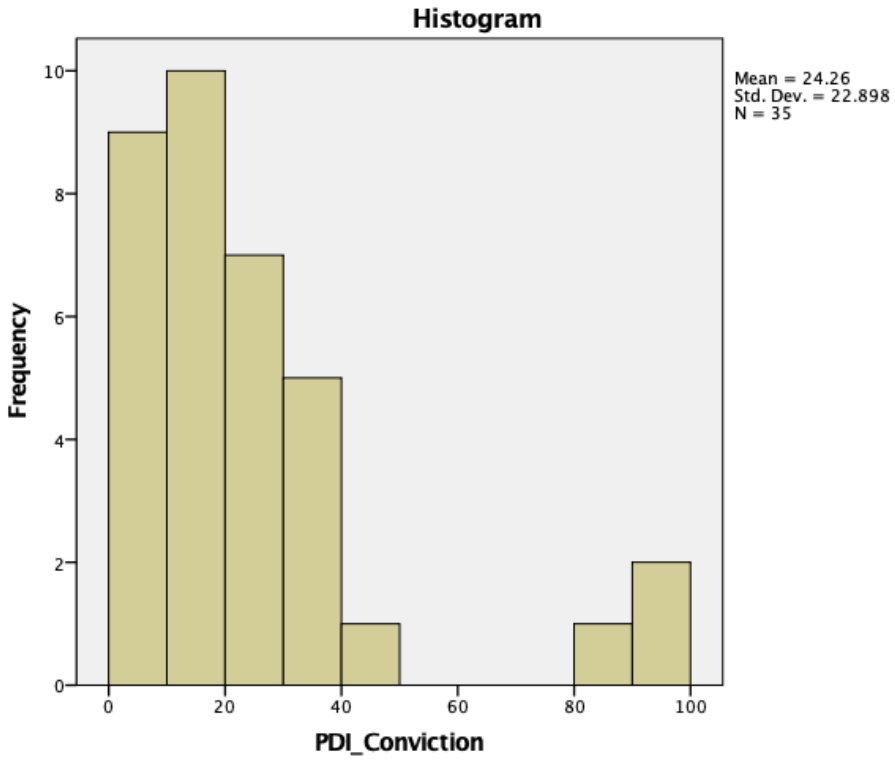


Figure R23. Histogram for the PDI Conviction subscale

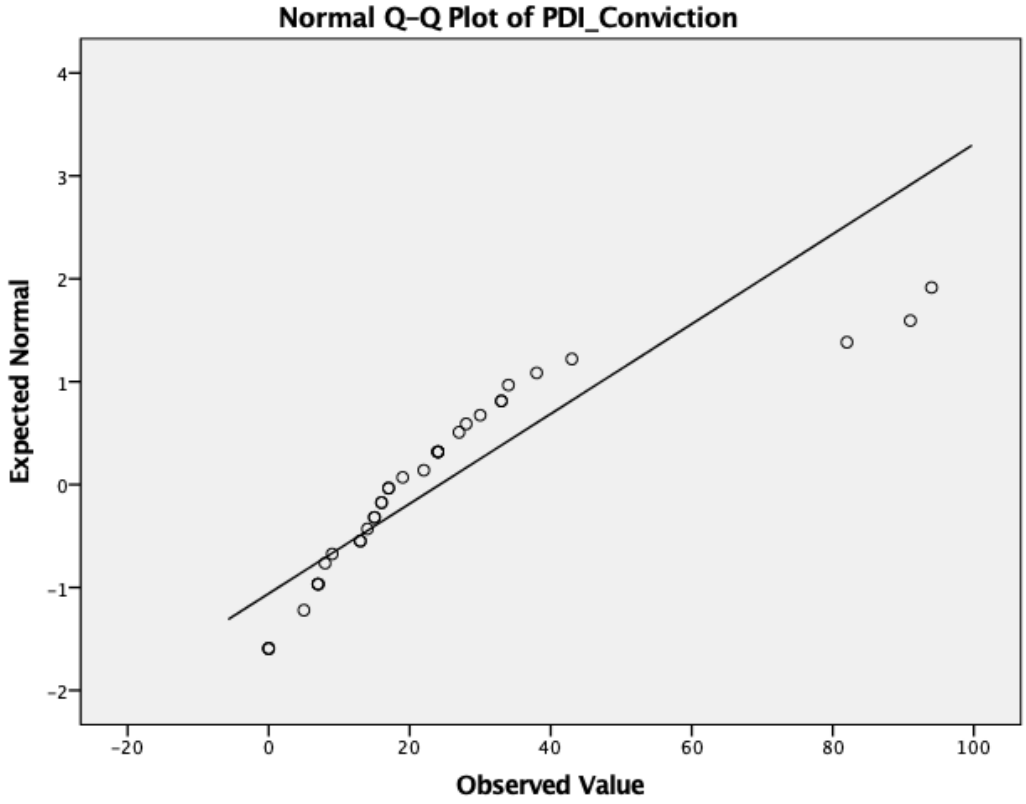


Figure R24. Q-Q plot for the PDI Conviction subscale

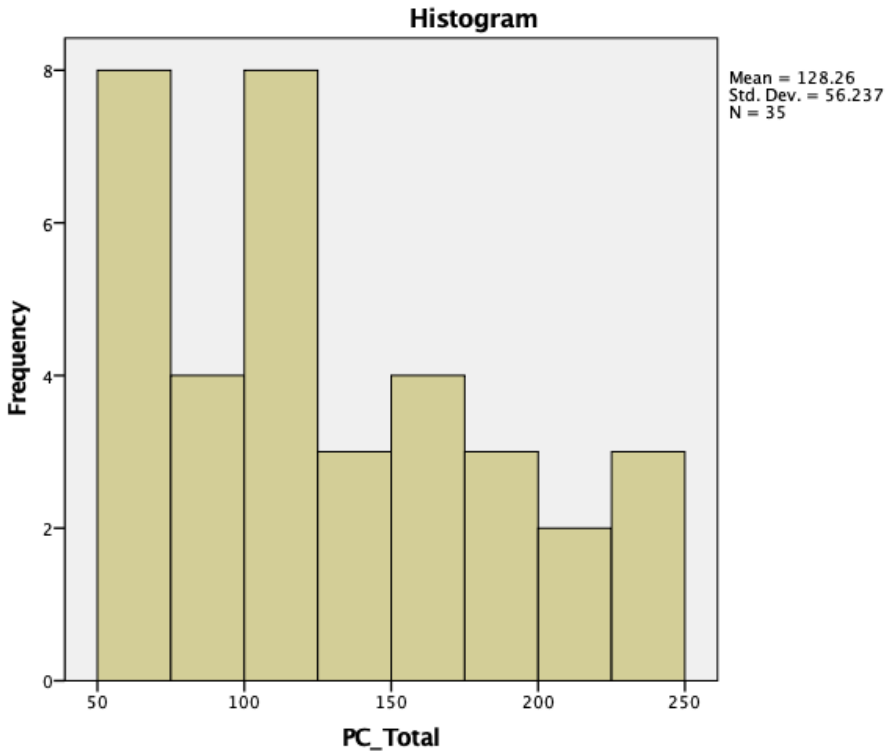


Figure R25. Histogram for the Paranoia Checklist (PC) Total

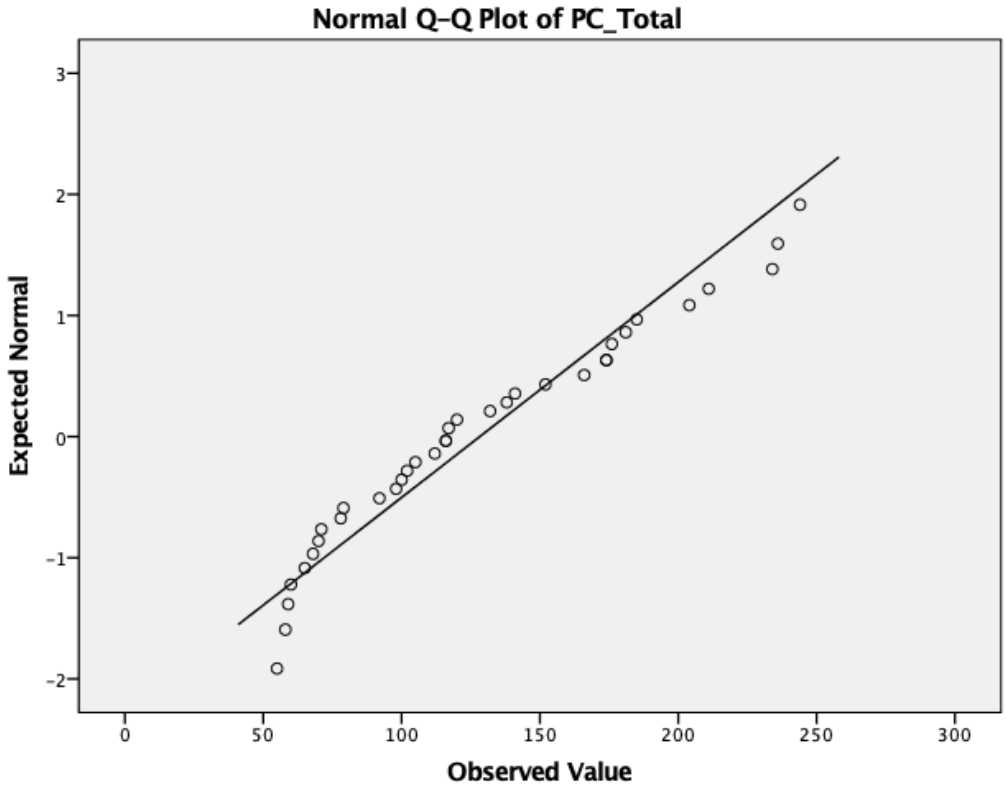


Figure R26. Q-Q plot for the PC Total

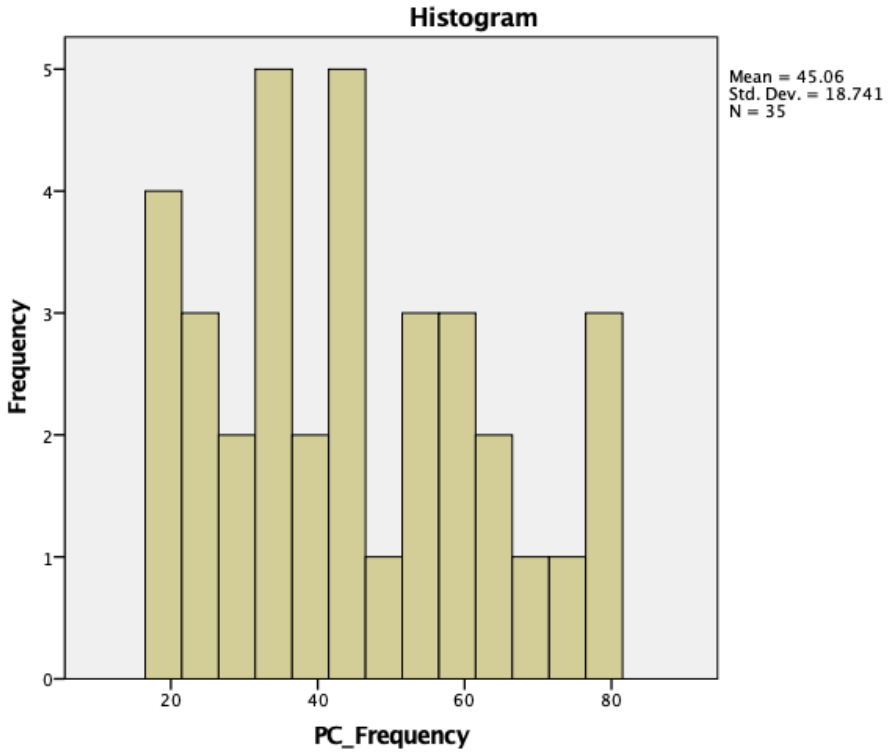


Figure R27. Histogram for the PC Frequency subscale

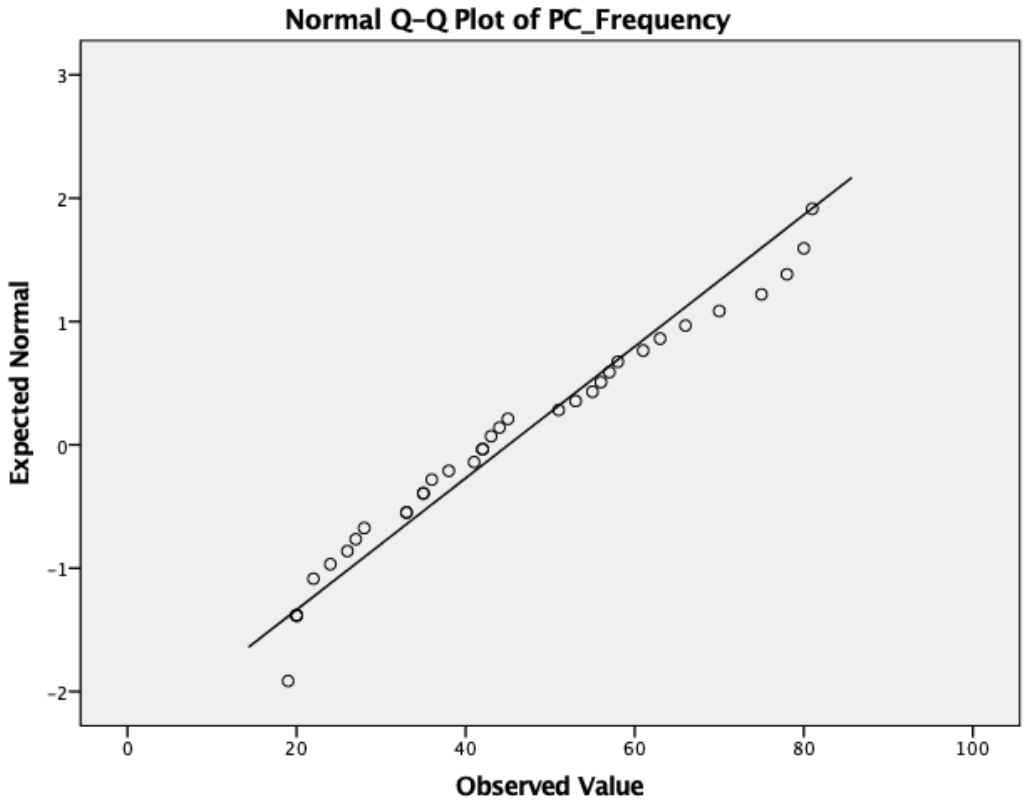


Figure R28. Q-Q plot for the PC Frequency subscale

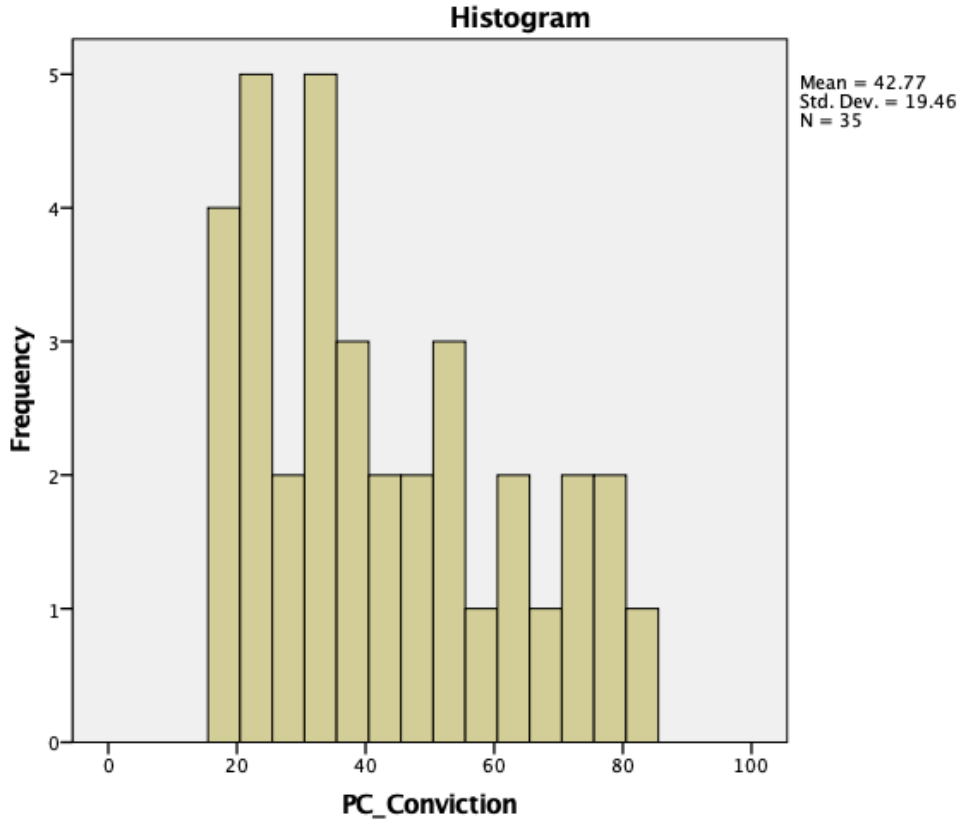


Figure R29. Histogram for the PC Conviction subscale

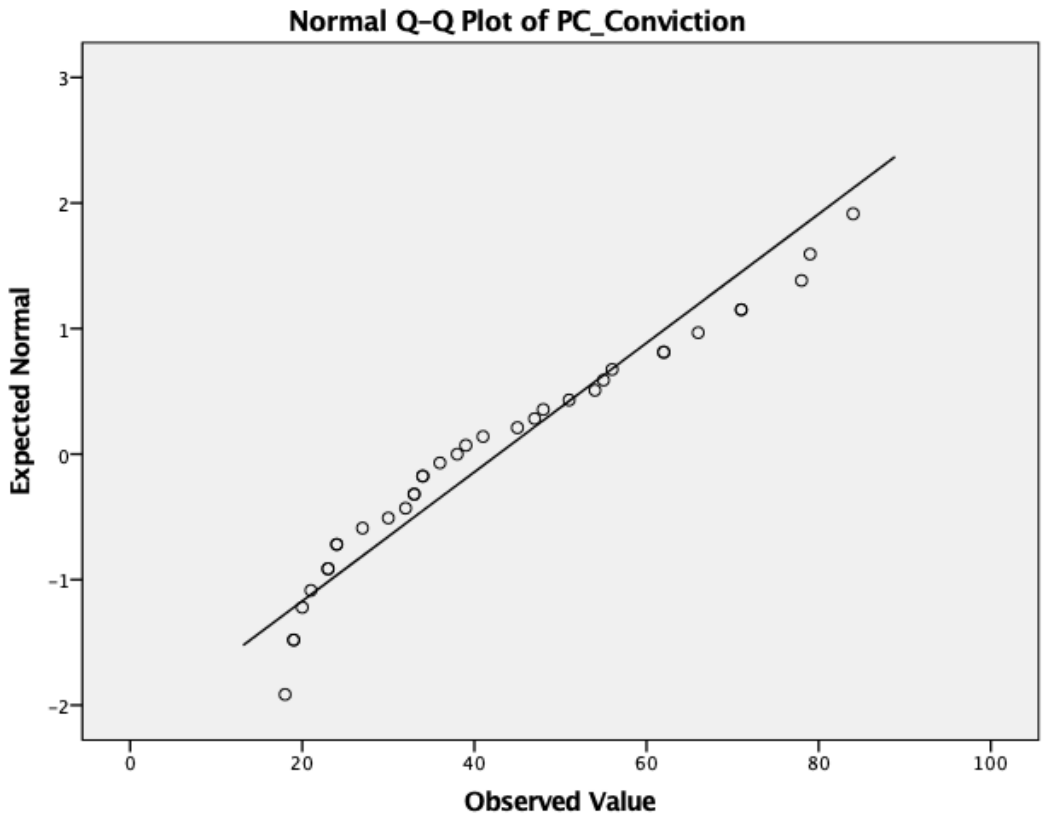


Figure R30. Q-Q plot for the PC Conviction subscale

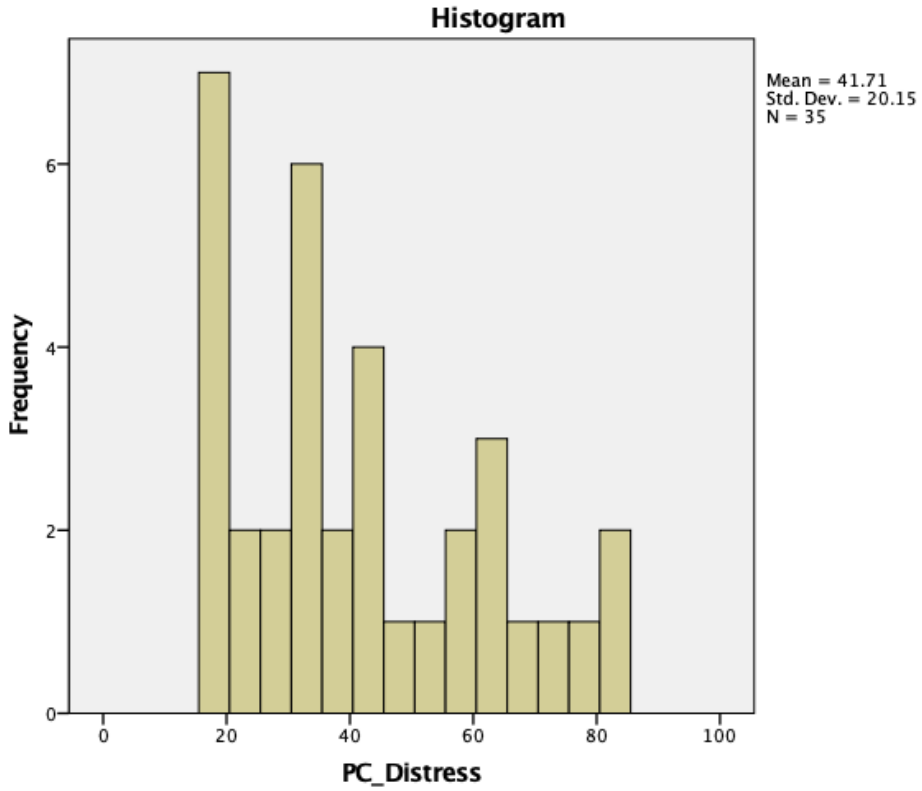


Figure R31. Histogram for the PC Distress subscale

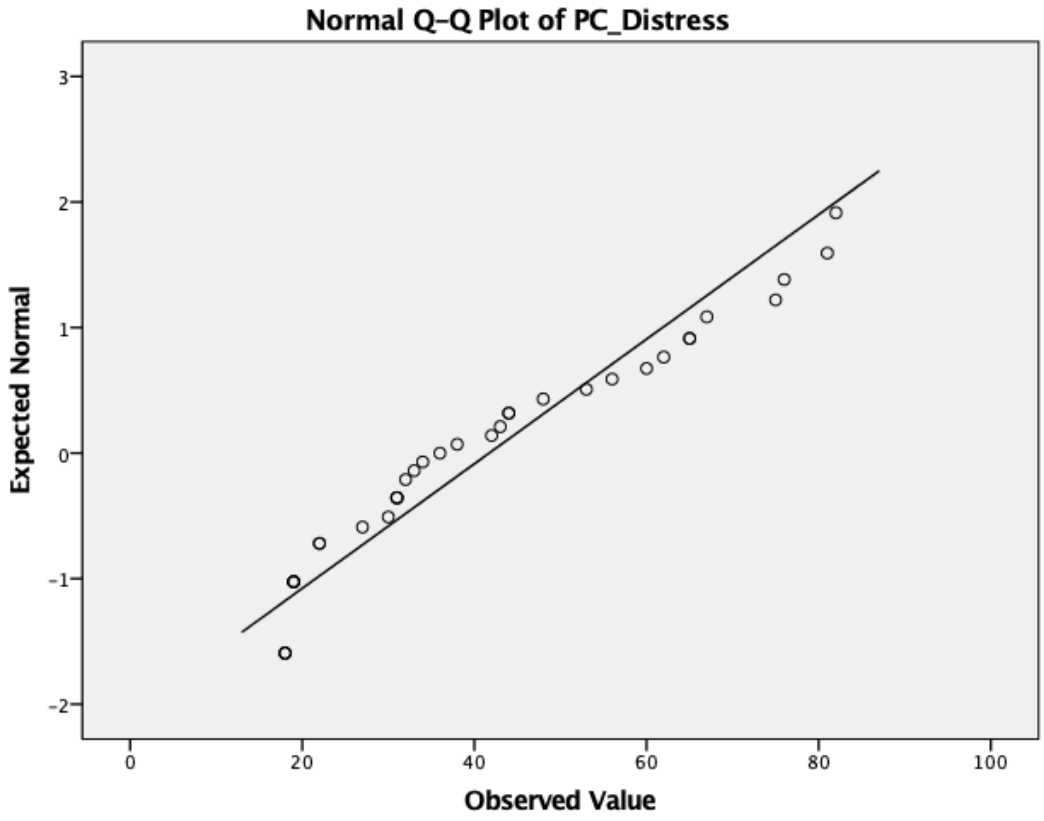


Figure R32. Q-Q plot for the PC Distress subscale

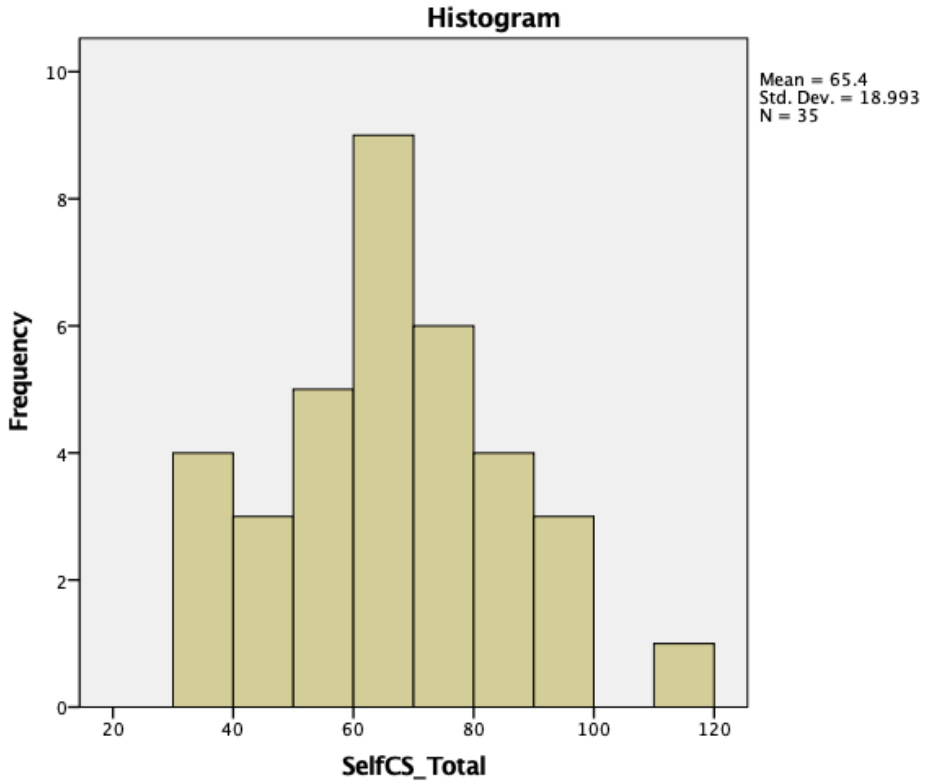


Figure R33. Histogram for the Self-compassion Scale (S-cS)

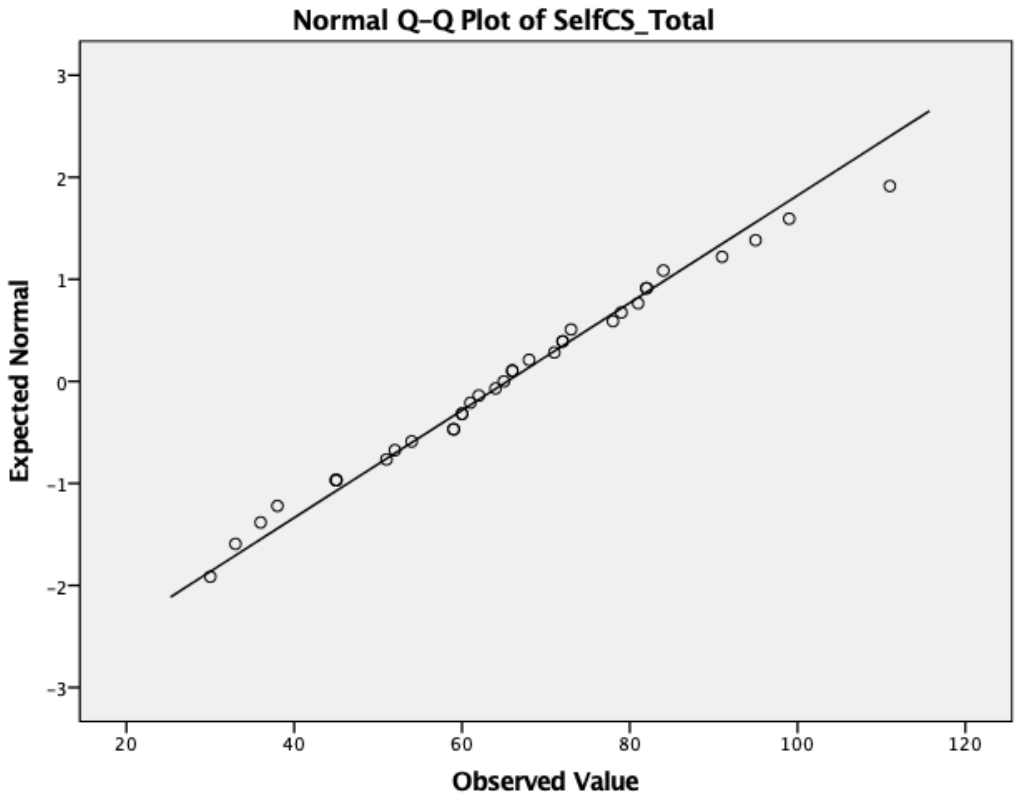


Figure R34. Q-Q plot for the S-cS

Appendix S: Transformed distribution plots for the skewed variables

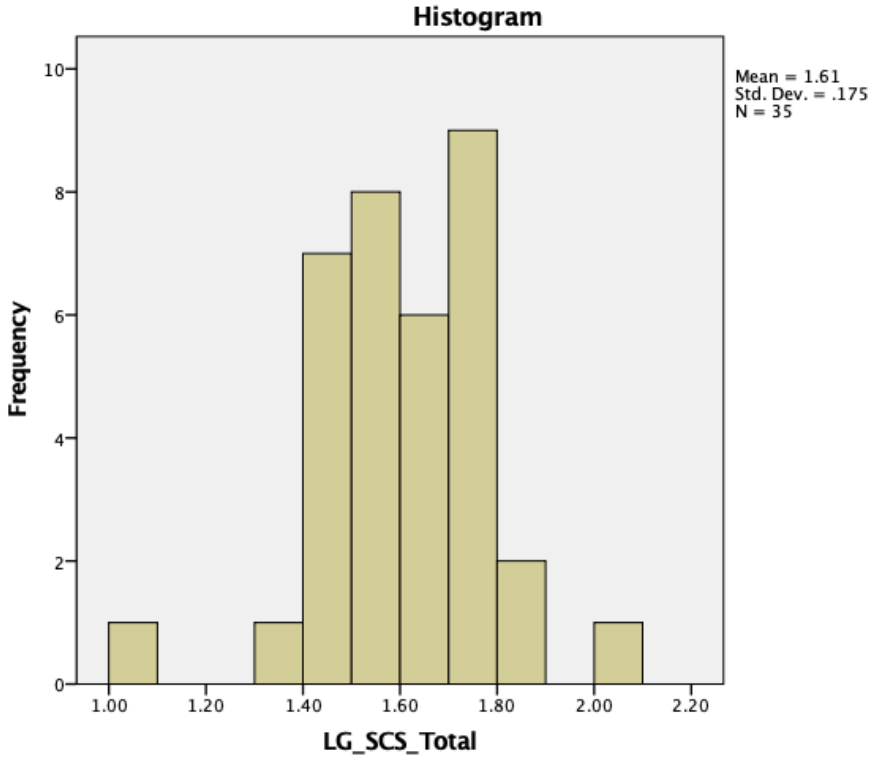


Figure S1. Histogram for the log transformed SCS Total

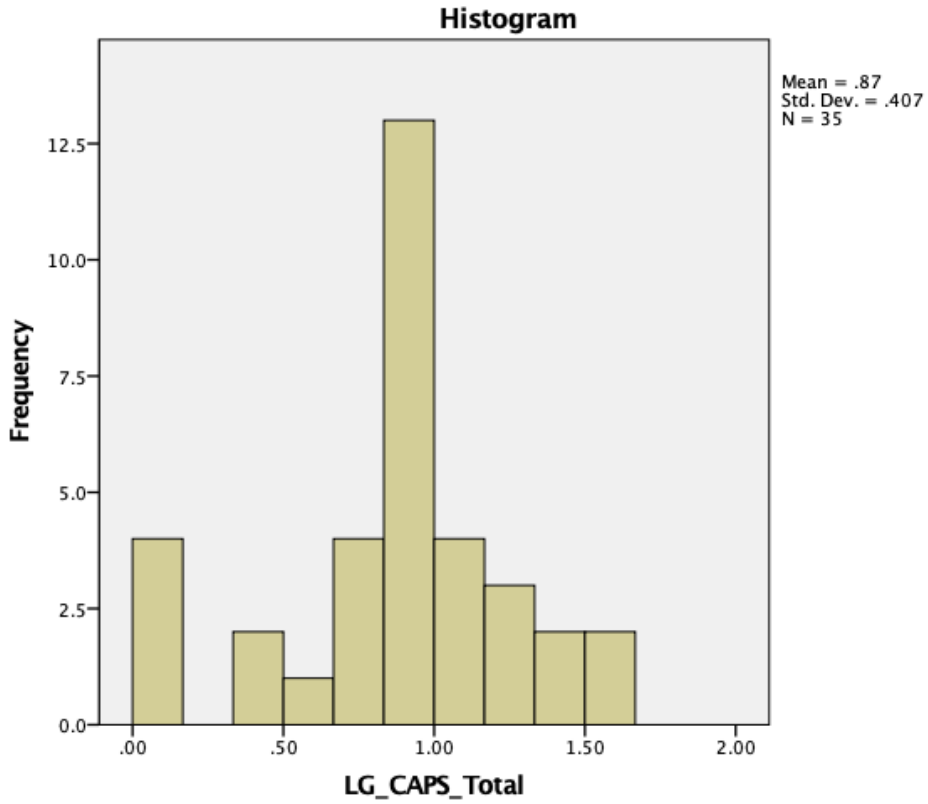


Figure S2. Histogram for the log transformed CAPS Total

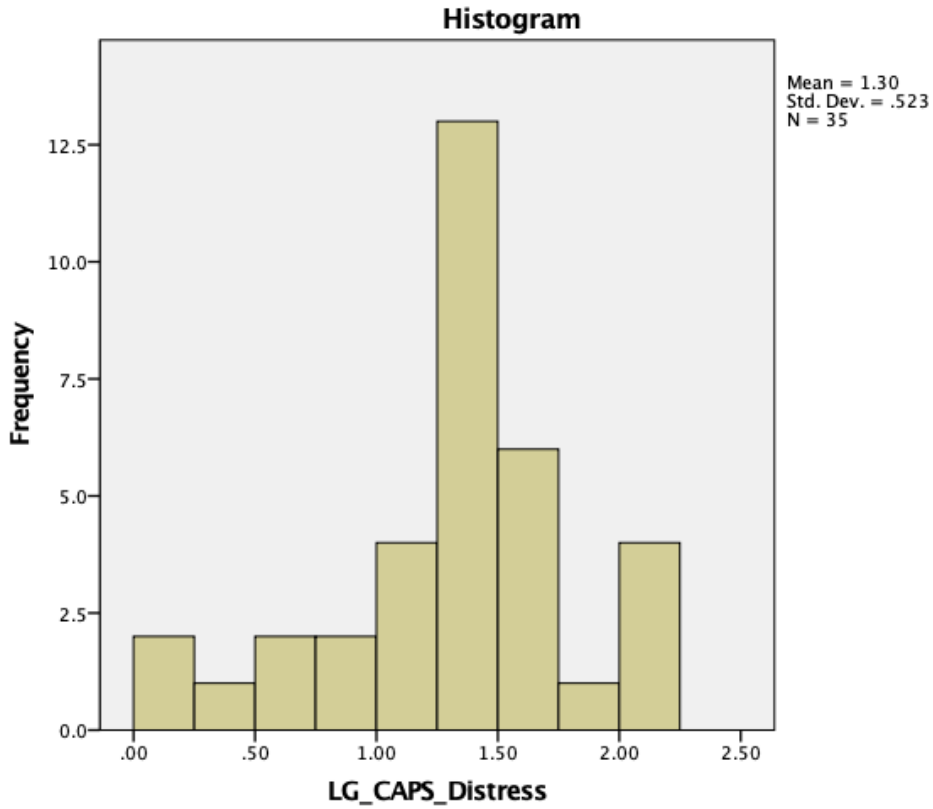


Figure S3. Histogram for the log transformed CAPS Distress

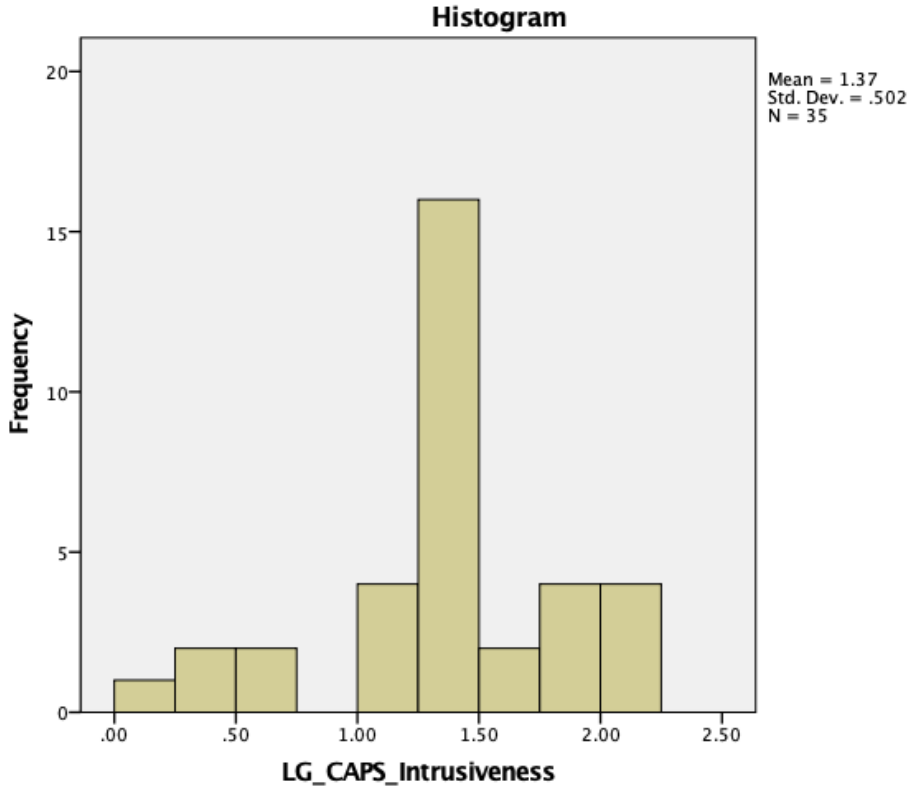


Figure S4. Histogram for the log transformed CAPS Intrusiveness

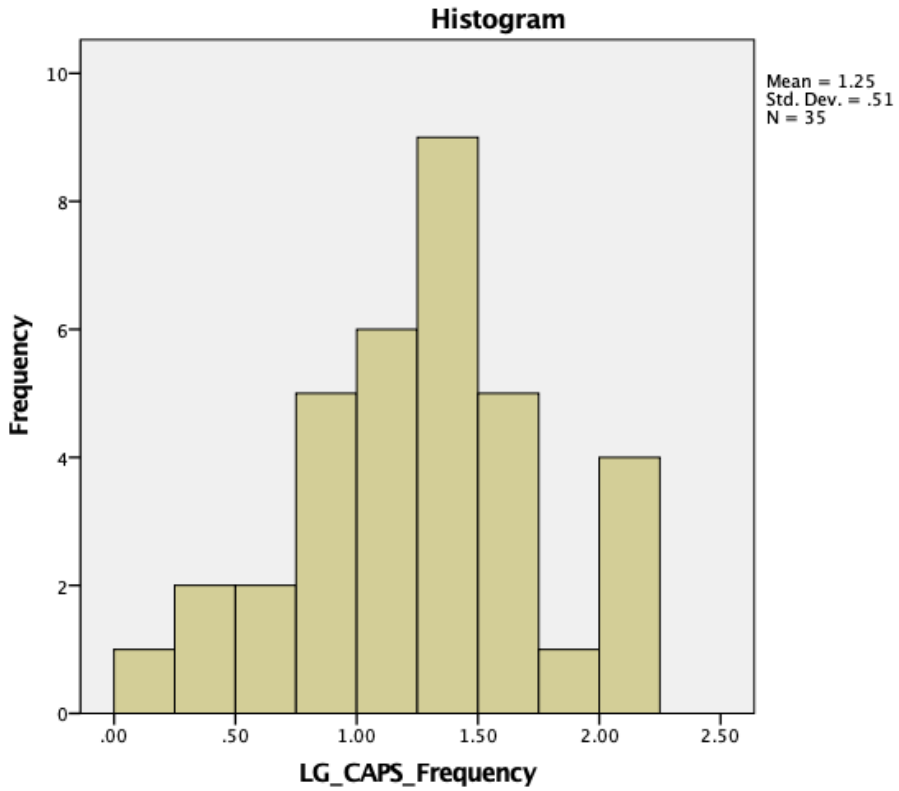


Figure S5. Histogram for the log transformed CAPS Frequency

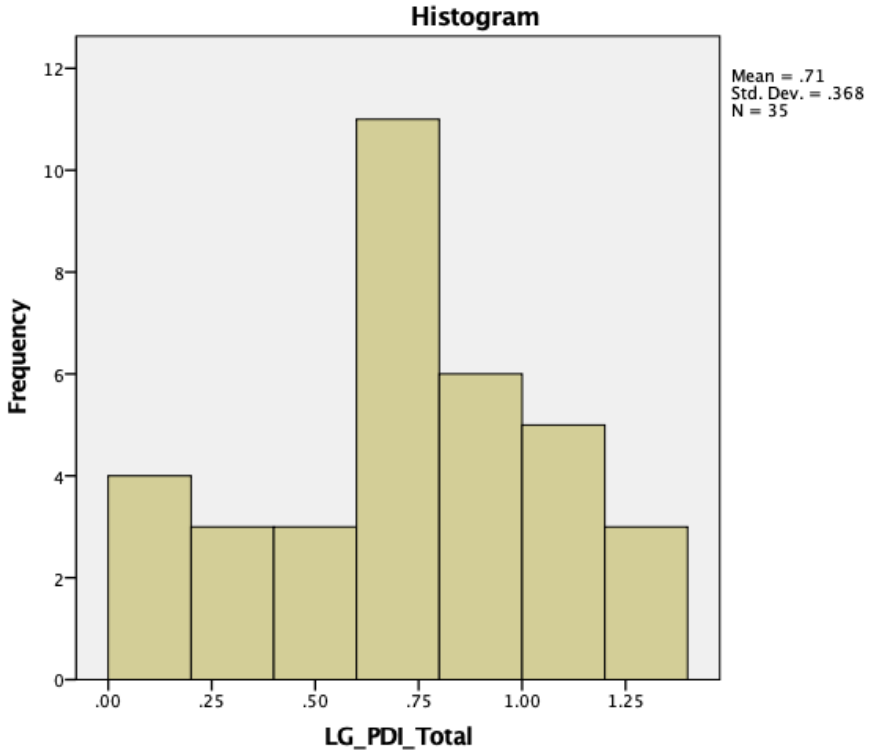


Figure S6. Histogram for the log transformed PDI Total

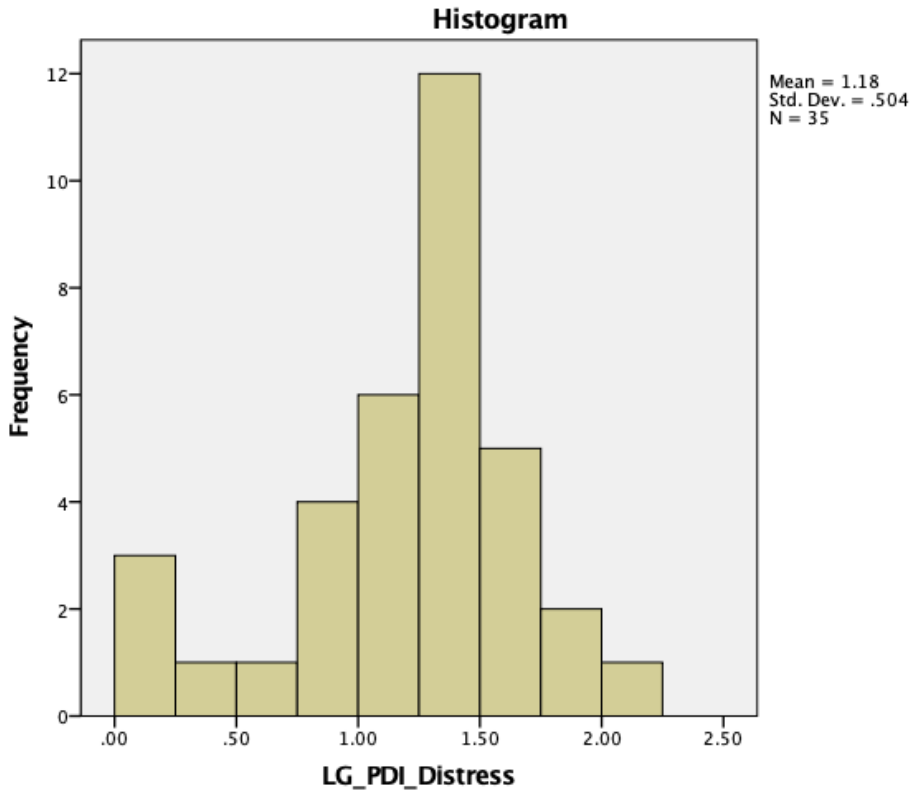


Figure S7. Histogram for the log transformed PDI Distress

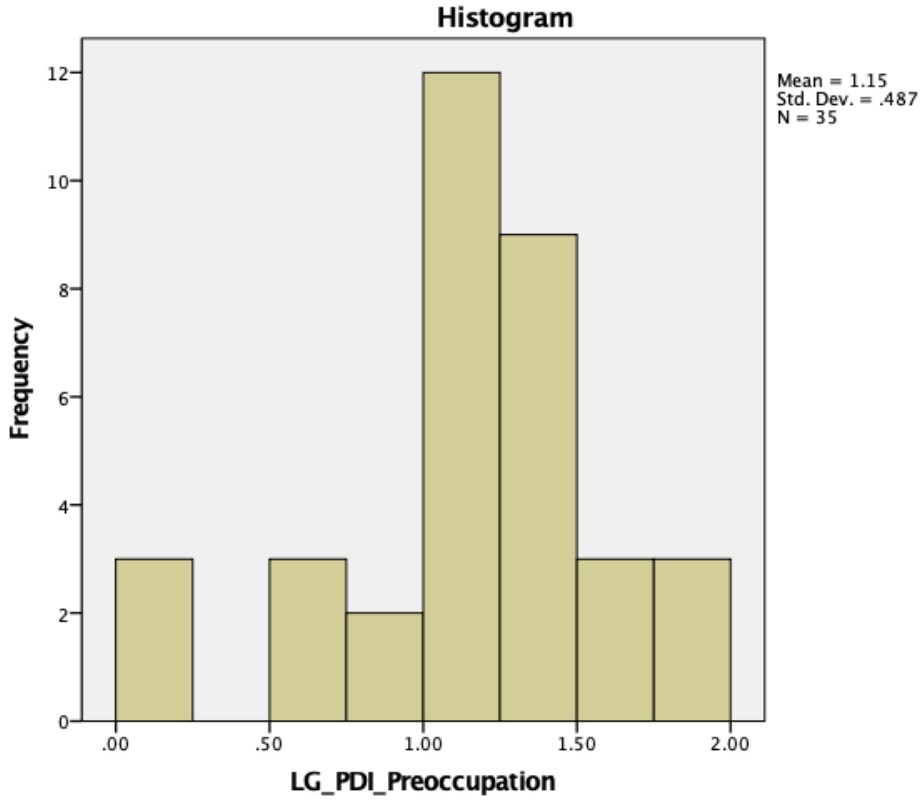


Figure S8. Histogram for the log transformed PDI Preoccupation

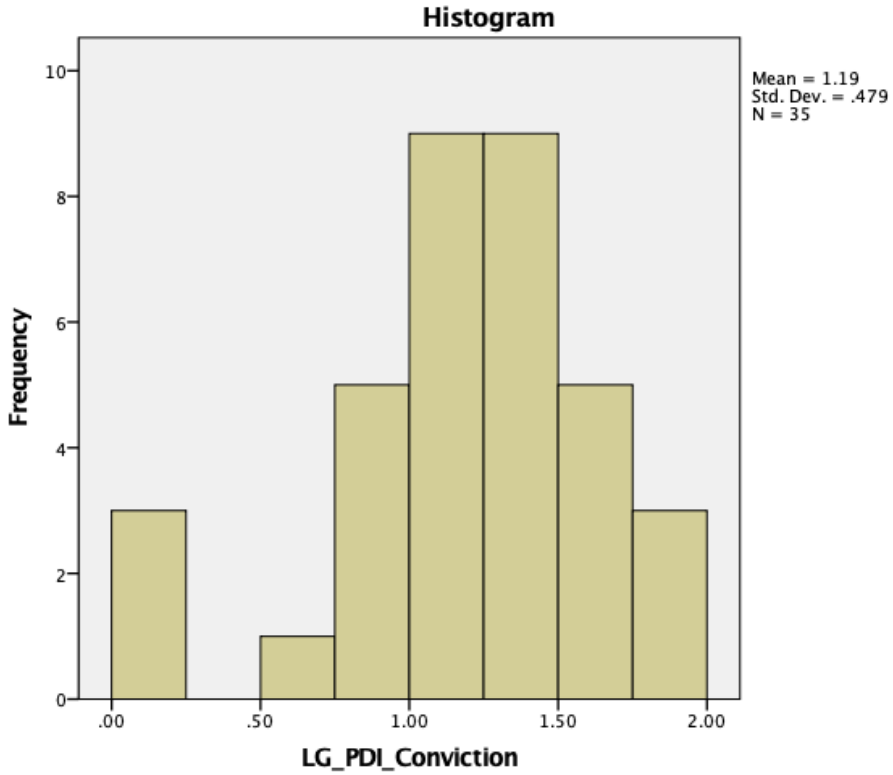


Figure S9. Histogram for the log transformed PDI Conviction

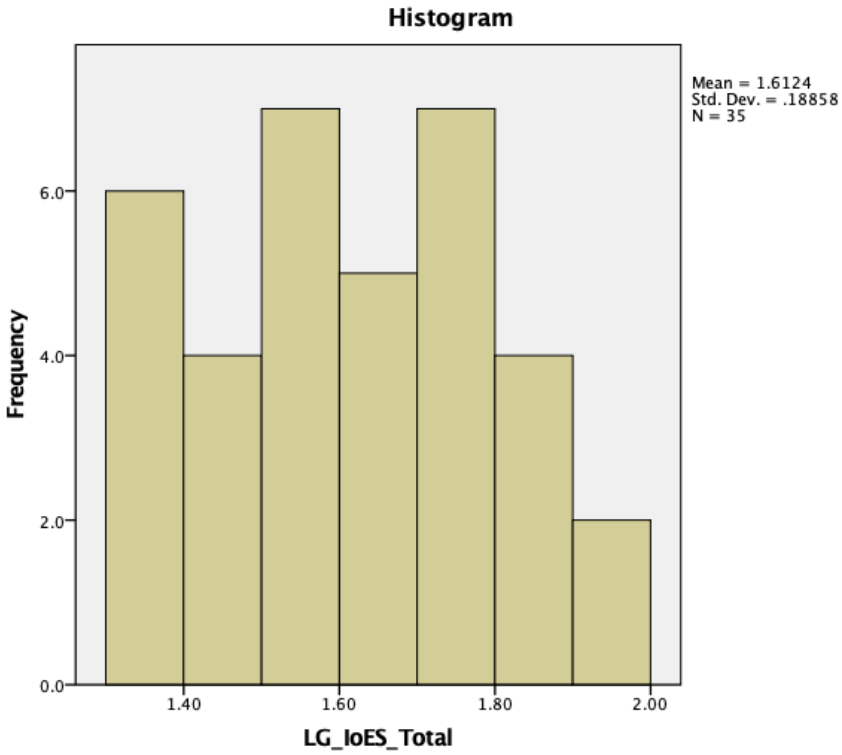


Figure S10. Histogram for the log transformed IES-R Total

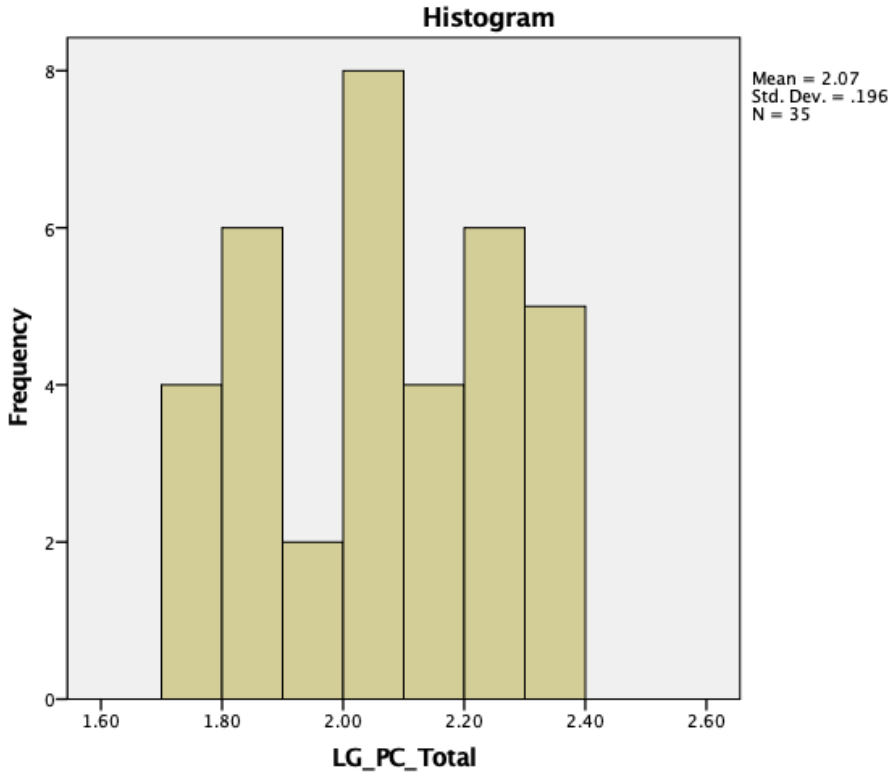


Figure S14. Histogram for the log transformed PC Total

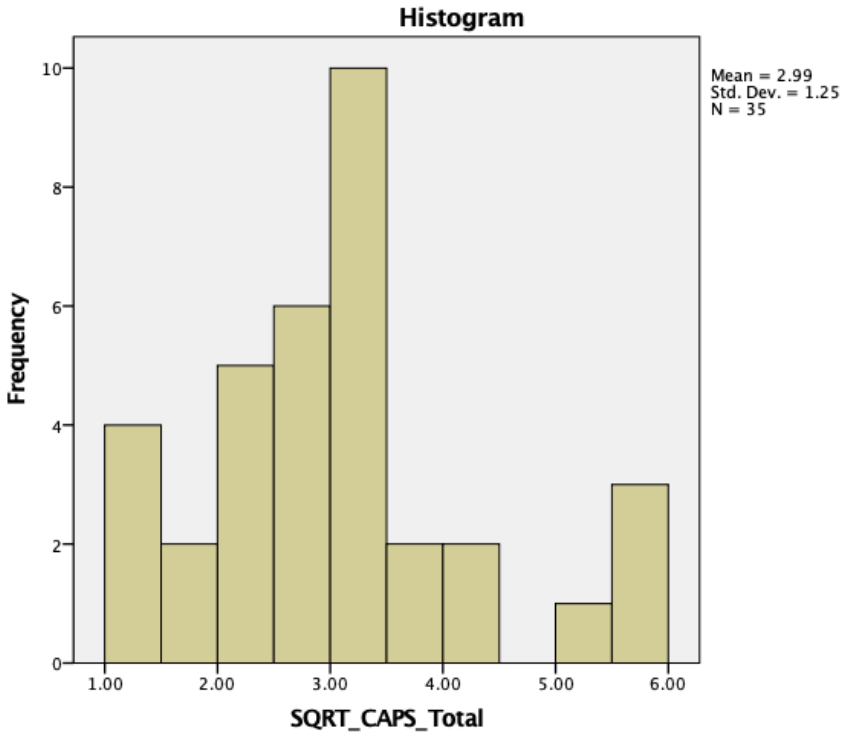


Figure S17. Histogram for the square root transformed CAPS Total

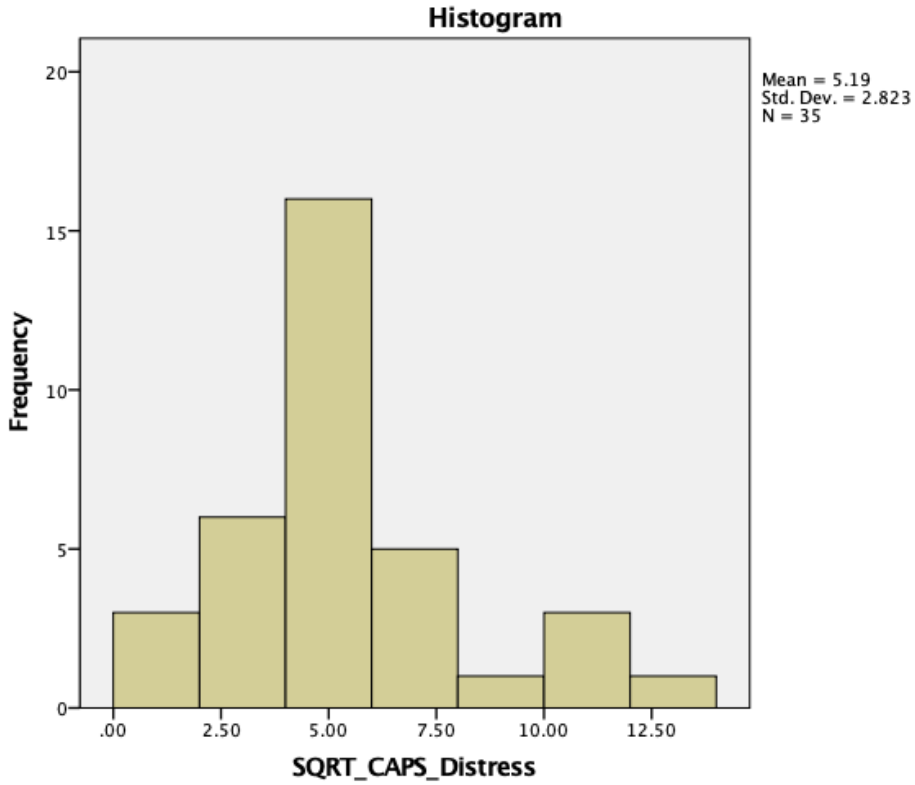


Figure S18. Histogram for the square root transformed CAPS Distress

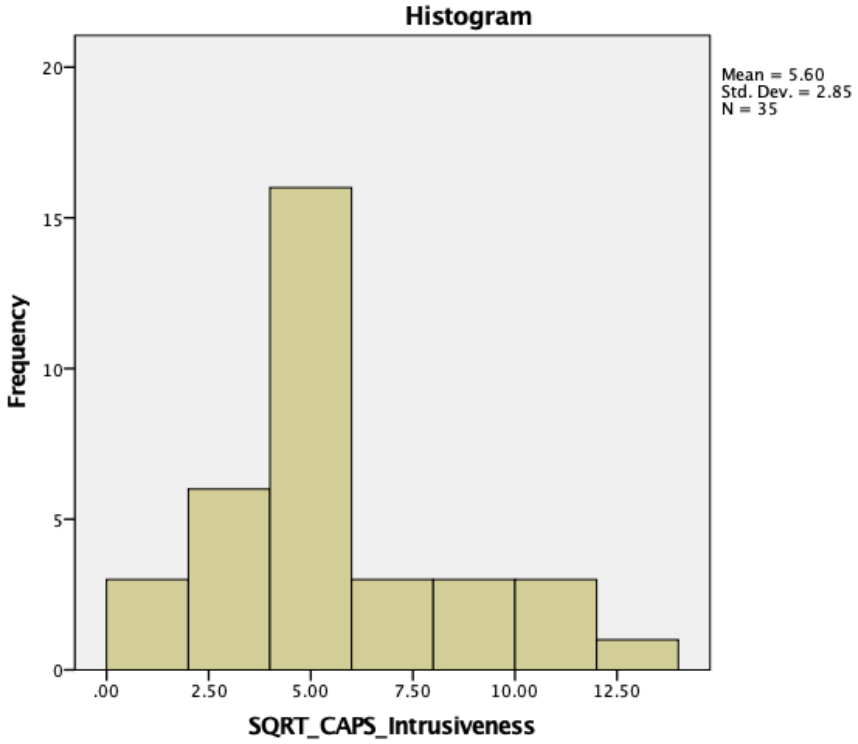


Figure S19. Histogram for the square root transformed CAPS Intrusiveness

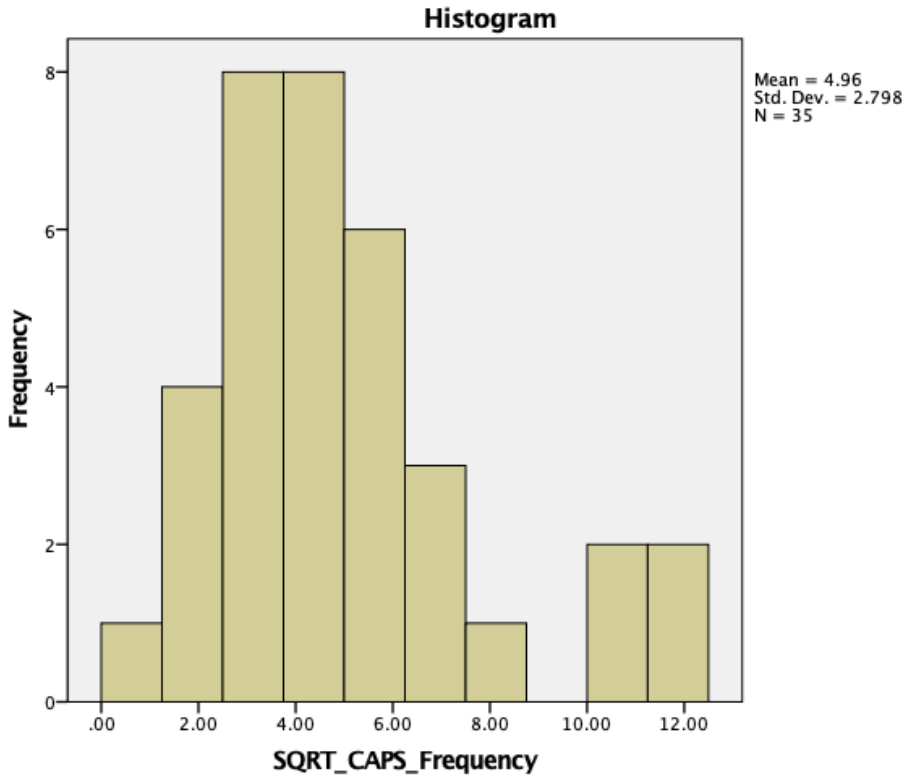


Figure S20. Histogram for the square root transformed CAPS Frequency

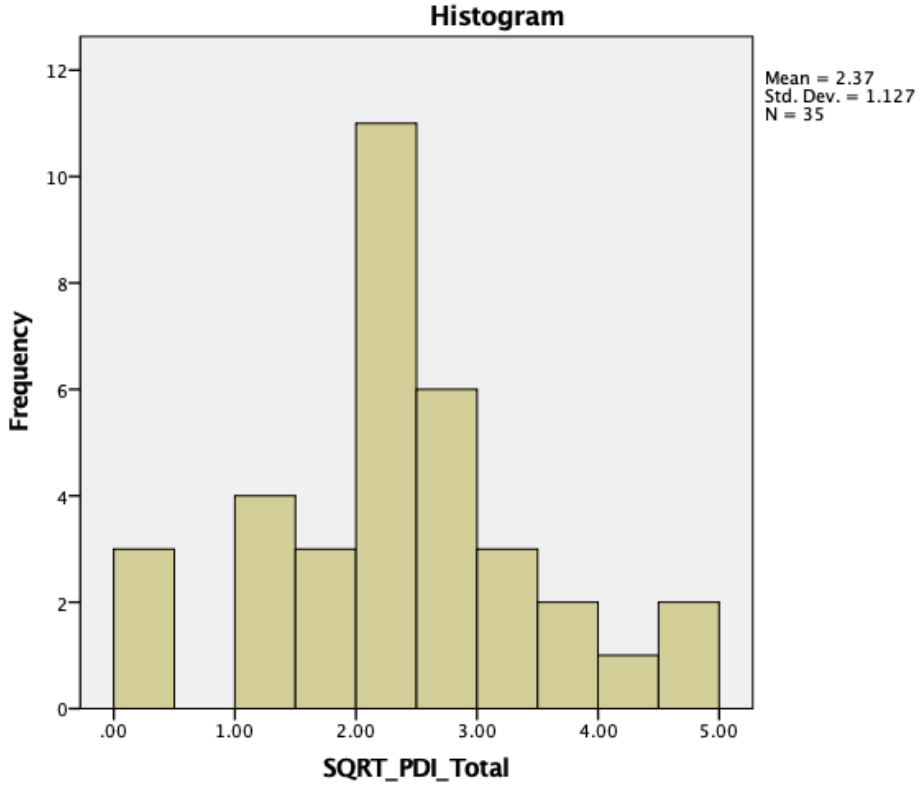


Figure S21. Histogram for the square root transformed PDI Total

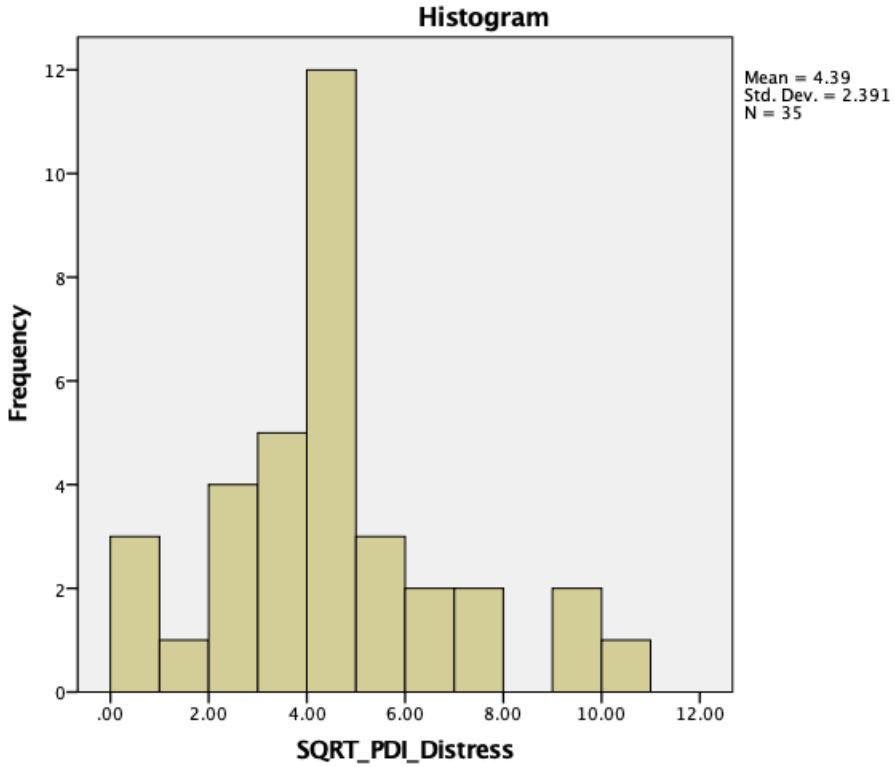


Figure S22. Histogram for the square root transformed PDI Distress

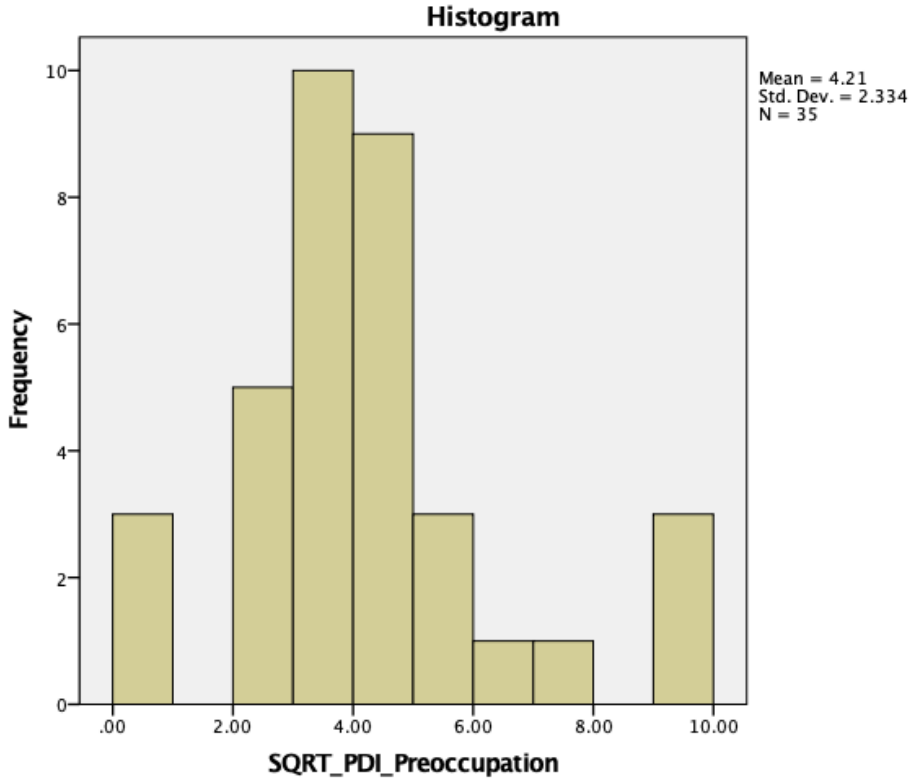


Figure S23. Histogram for the square root transformed PDI Preoccupation

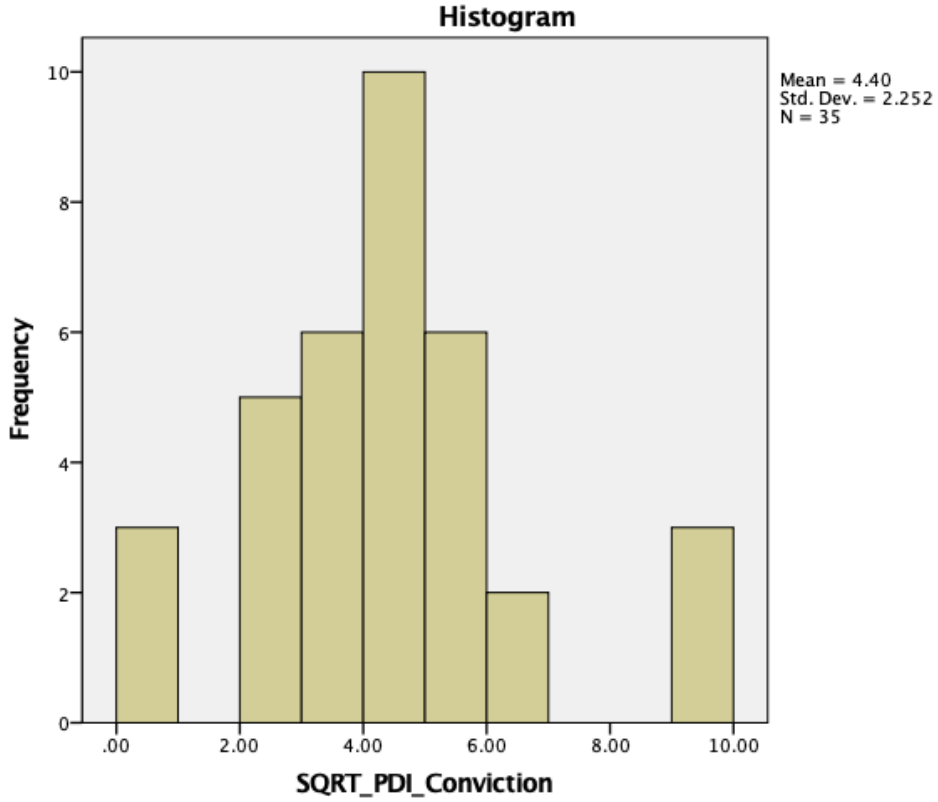


Figure S24. Histogram for the square root transformed PDI Conviction

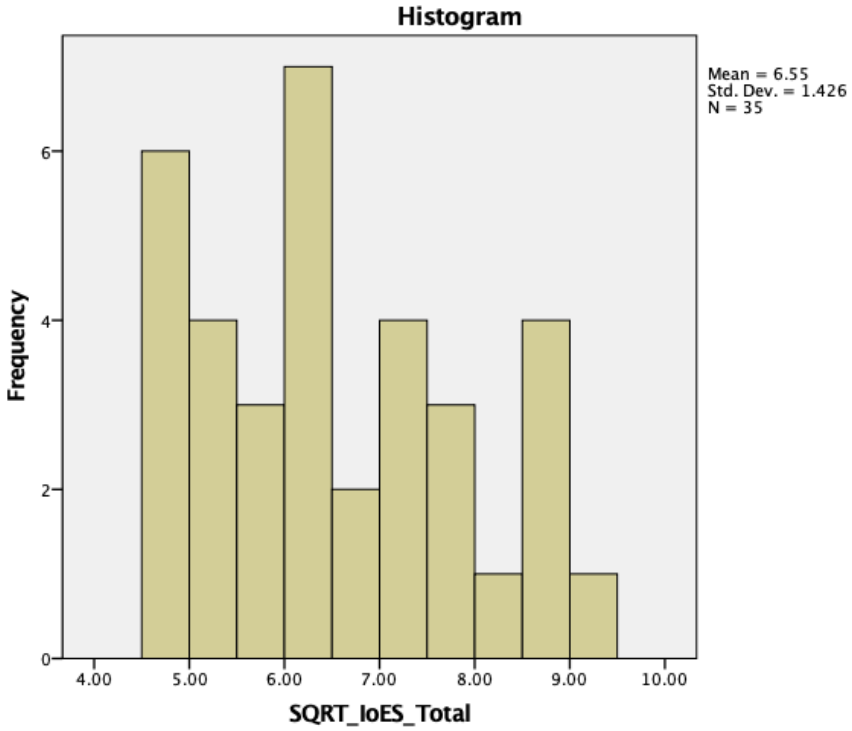


Figure S25. Histogram for the square root transformed IES-R Total

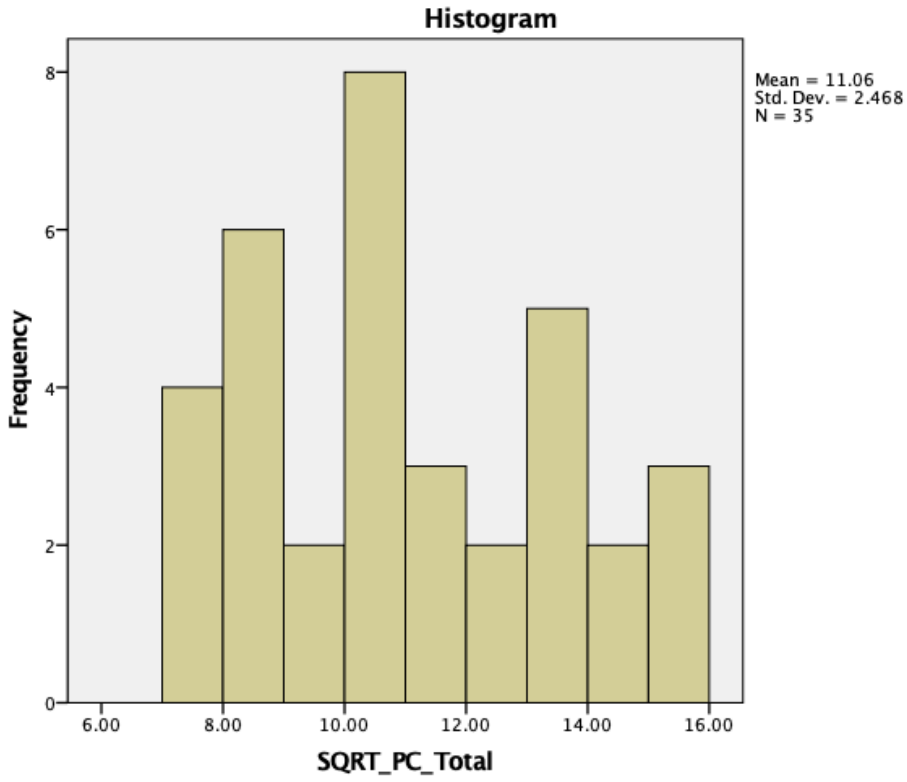


Figure S29. Histogram for the square root transformed PC Total

Appendix T: SPSS output for multiple regressions

Table T1. Regression analysis: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.260[a]	.068	.009	17.604	.068	1.160	2	32	.326	1.516

a. Predictors: (Constant), CES_Total, IoES Total

b. Dependent Variable: SCS_Total

Table T2. Regression analysis: bootstrap for model summary

Model	Durbin-Watson	Bootstrap[a]			
		Bias	Std. Error	BCa 95% Confidence Interval	
				Lower	Upper
1	1.516	-.350	.229	.933	1.394

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Table T3. Regression analysis: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.595[a]	.354	.313	7.434	.354	8.750	2	32	.001	2.351

a. Predictors: (Constant), CES_Total, IoES Total

b. Dependent Variable: OAS2_Total

Table T4. Regression analysis: bootstrap for model summary

Model	Durbin-Watson	Bootstrap[a]			
		Bias	Std. Error	BCa 95% Confidence Interval	
				Lower	Upper
1	2.351	-.805	.294	.703	2.473

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Table T5. Regression analysis: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.694[a]	.481	.449	28.456	.481	14.836	2	32	.000	1.629

a. Predictors: (Constant), CES_Total, IoES Total

b. Dependent Variable: CAPS_Distress

Table T6. Regression analysis: bootstrap for model summary

Model	Durbin-Watson	Bootstrap[a]			
		Bias	Std. Error	BCa 95% Confidence Interval	
				Lower	Upper
1	1.629	-.362	.292	1.124	1.393

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Table T7. Regression analysis: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.726[a]	.527	.497	17.696	.527	17.791	2	32	.000	1.230

a. Predictors: (Constant), CES_Total, IoES Total

b. Dependent Variable: PDI_Distress

Table T8. Regression analysis: bootstrap for model summary

Model	Durbin-Watson	Bootstrap[a]			
		Bias	Std. Error	BCa 95% Confidence Interval	
				Lower	Upper
1	1.230	-.186	.291	.825	1.247

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Table T9. Regression analysis: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.593[a]	.351	.311	16.732	.351	8.656	2	32	.001	1.740

a. Predictors: (Constant), CES_Total, IoES Total

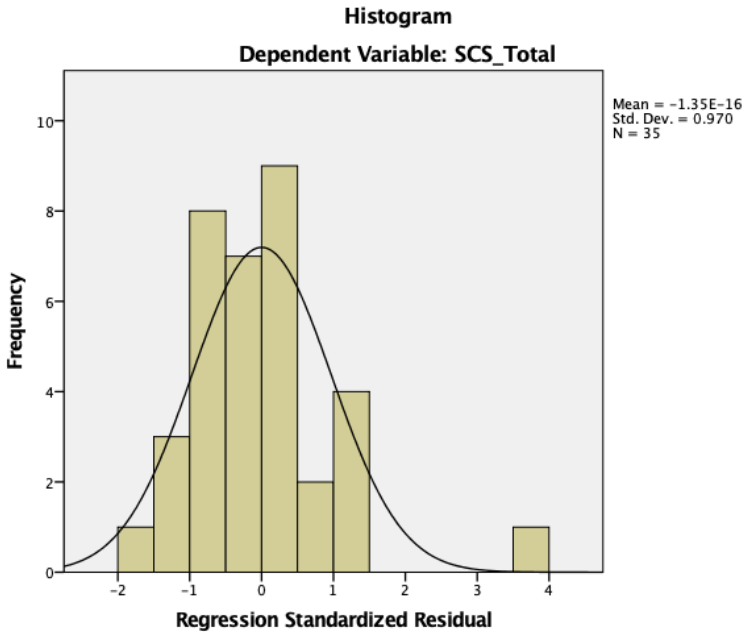
b. Dependent Variable: PC_Distress

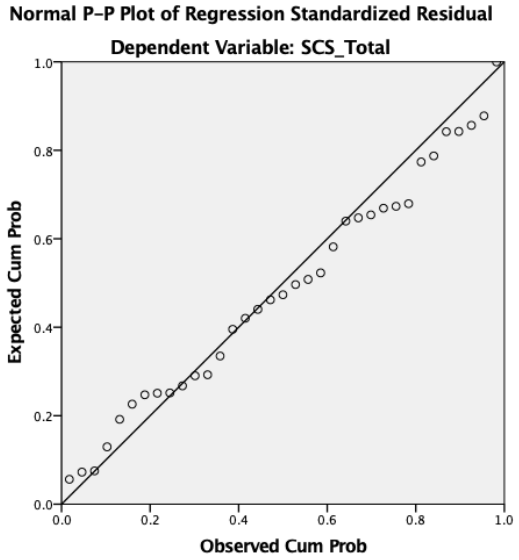
Table T10. Regression analysis: bootstrap for model summary

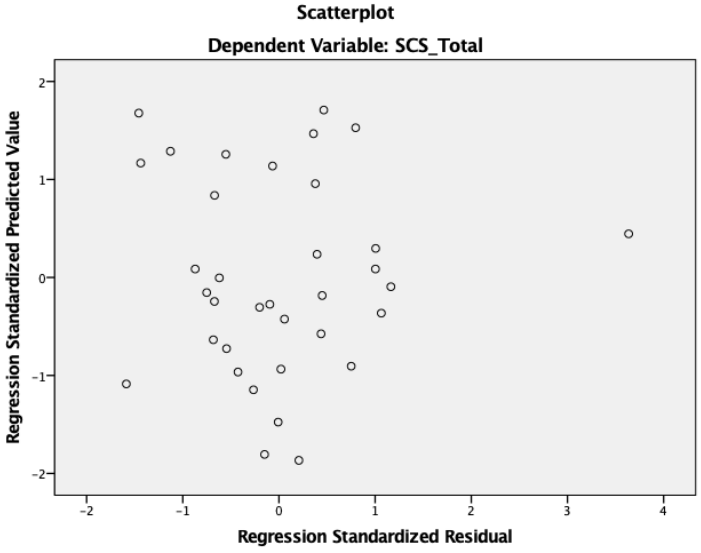
Model	Durbin-Watson	Bootstrap[a]			
				BCa 95% Confidence Interval	
		Bias	Std. Error	Lower	Upper
1	1.740	-.444	.303	1.045	1.543

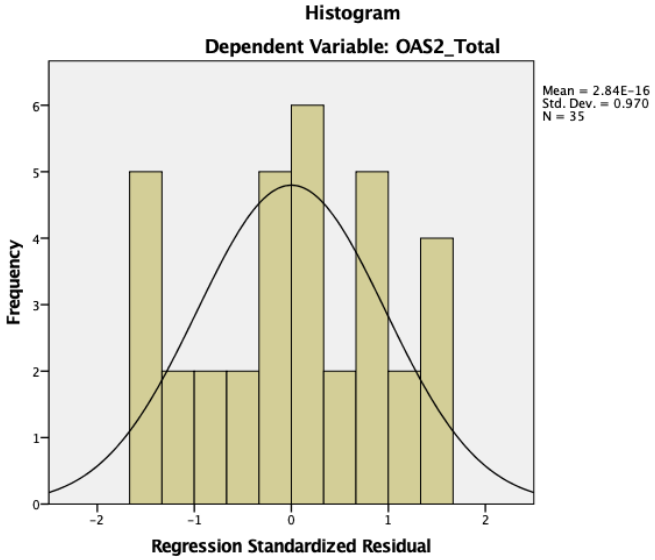
a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

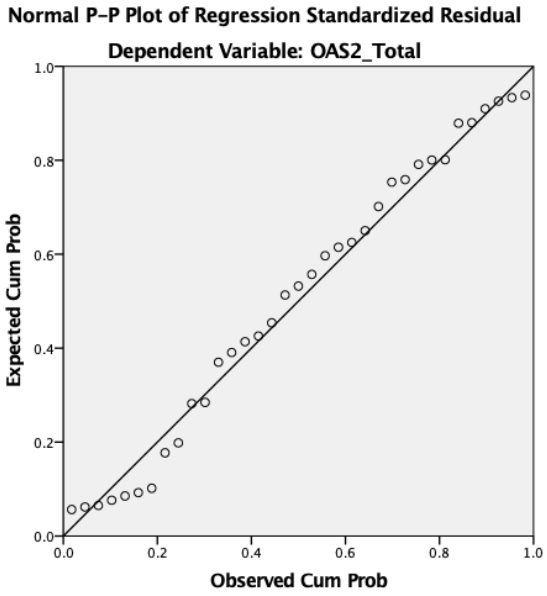
Appendix U: Multiple Regression Assumption Tests

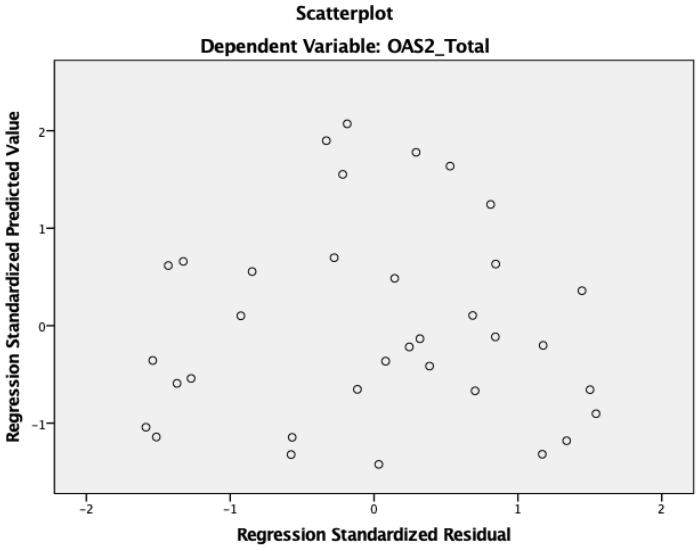


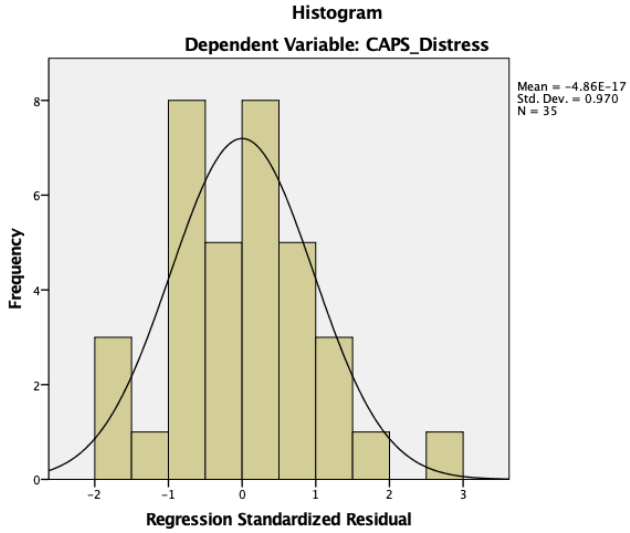


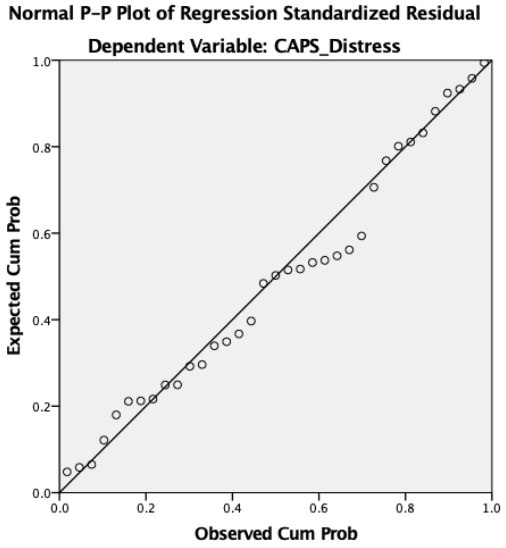


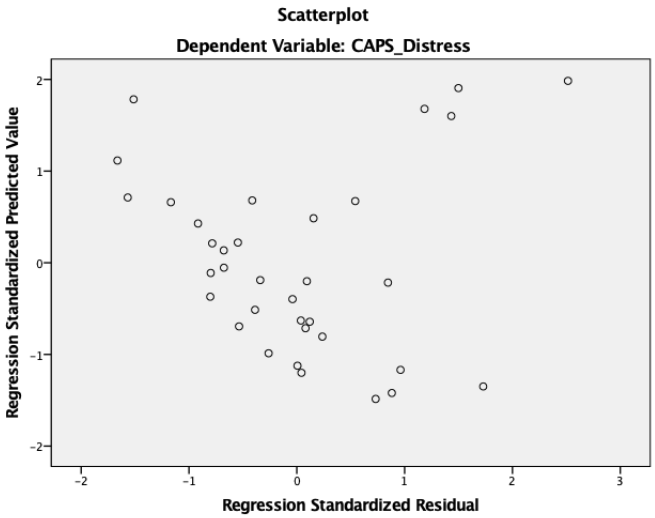

Histogram
Dependent Variable: OAS2_Total
Mean = 2.84E-16
Std. Dev. = 0.970
N = 35
Frequency
Regression Standardized Residual

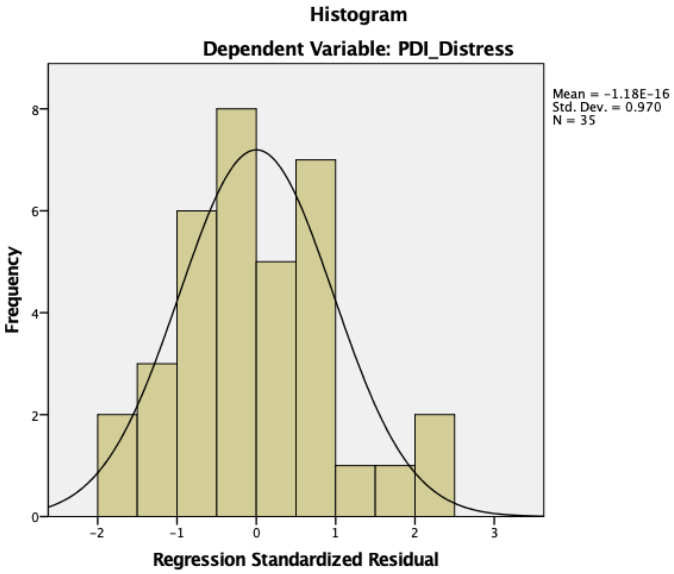

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: OAS2_Total
Expected Cum Prob
Observed Cum Prob

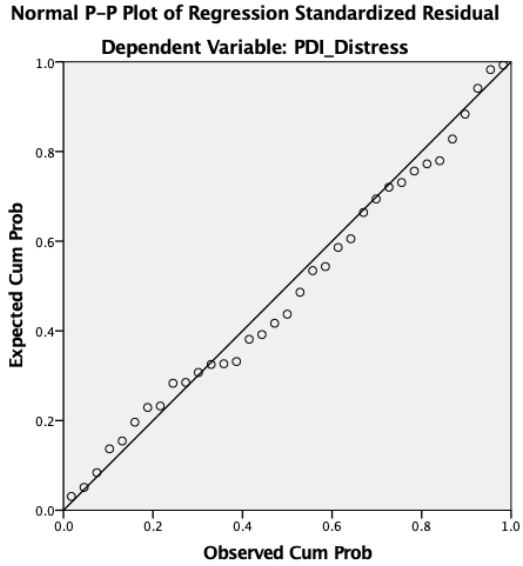

Scatterplot
Dependent Variable: OAS2_Total
Regression Standardized Predicted Value
Regression Standardized Residual

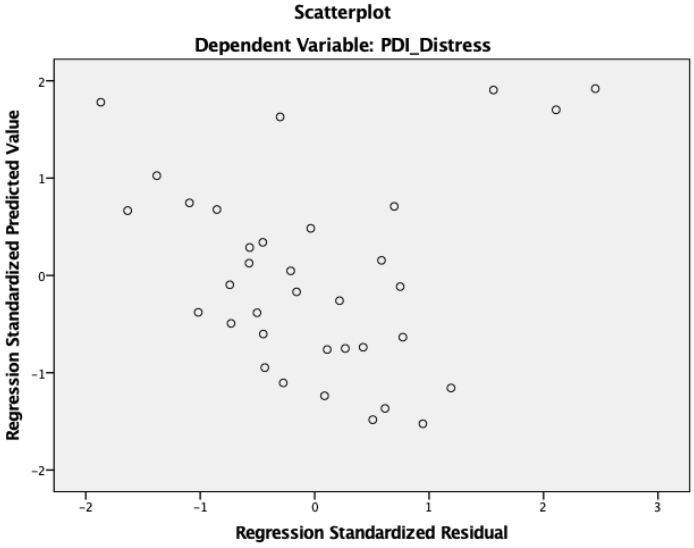

Histogram
Dependent Variable: CAPS_Distress
Mean = -4.86E-17
Std. Dev. = 0.970
N = 35
Frequency
Regression Standardized Residual

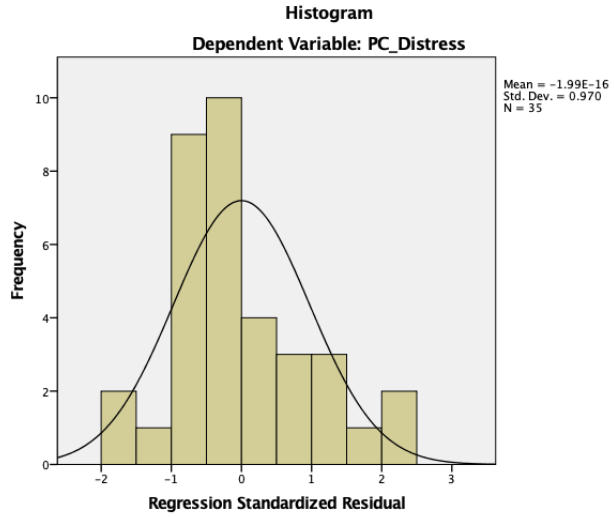

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: CAPS_Distress
Expected Cum Prob
Observed Cum Prob

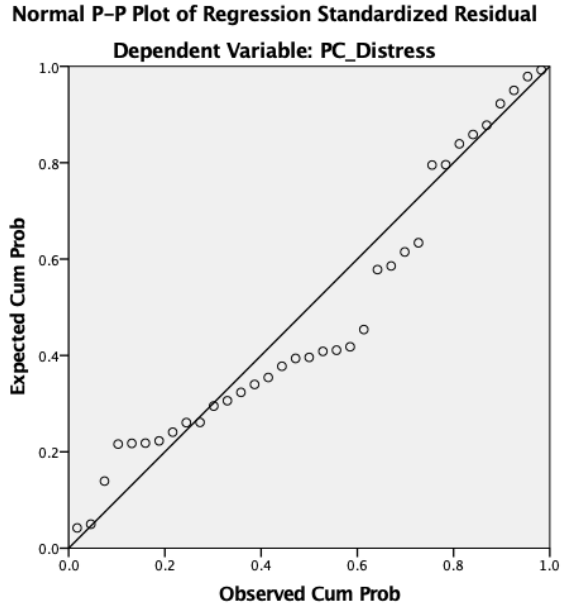

Scatterplot
Dependent Variable: CAPS_Distress
Regression Standardized Predicted Value
Regression Standardized Residual

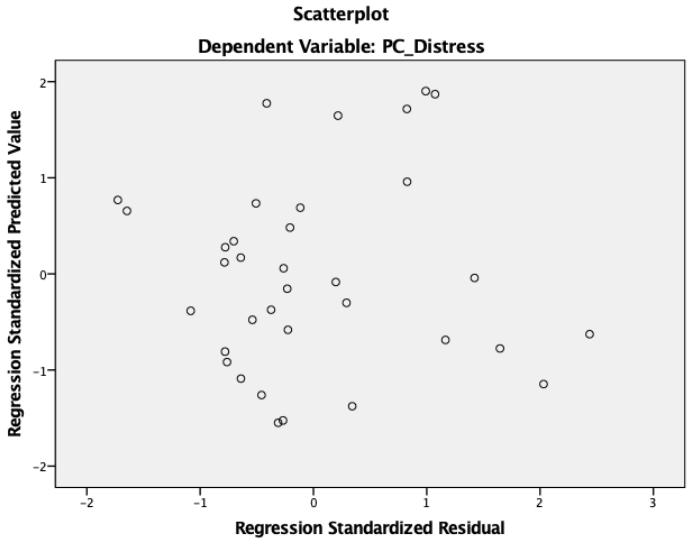

Histogram
Dependent Variable: PDI_Distress
Mean = -1.18E-16
Std. Dev. = 0.970
N = 35
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: PDI_Distress
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: PDI_Distress
Regression Standardized Predicted Value
Regression Standardized Residual


Histogram
Dependent Variable: PC_Distress
Mean = -1.99E-16
Std. Dev. = 0.970
N = 35
Frequency
Regression Standardized Residual


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: PC_Distress
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: PC_Distress
Regression Standardized Predicted Value
Regression Standardized Residual

Appendix V: Information on the non-significant moderation analyses

Does external shame moderate the relationship between traumatic SM and CAPS distress?

A moderation analysis was performed to investigate whether external shame (OAS-2) moderated the relationship between IES-R and CAPS_D.

Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

Outliers and influential cases

No cases were found to have a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). One case (2.9%) was found to have a standardised residual greater than 2, thus meeting Field's (2009) recommendation. One standardised DFBeta statistic was slightly greater than 1 (1.1), however Cook's distance indicated that no cases were greater than 1 (Cook & Weisberg, 1982), suggesting that no cases had a large influence on the model (Field, 2009).

Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and OAS-2 (external shame) were entered. These variables accounted for a significant amount of variance in the CAPS_D, $R^2 = .450$, $F(2, 32) = 13.074$, $p < .001$. The variables were then centred and an interaction term between IES-R and OAS-2 was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and did not account for a significant proportion of the variance in CAPS_D, $\Delta R^2 = .011$, $\Delta F(1, 31) = .630$, $p = .433$ (see Appendix X). External shame did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with unusual experiences.

Does external shame moderate the relationship between traumatic SM and PDI distress?

The same moderation analysis was then performed, replacing the distress associated with unusual experiences with the distress associated with unusual beliefs (PDI_D).

Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). Two cases (5.7%) were found to have standardised residuals greater than 2, slightly exceeding Field's (2009) recommendation. However, Cook's distance (Cook & Weisberg, 1982) and examination of the standardised DFBeta revealed no cases greater than 1, indicating that no cases had a large influence on the model (Field, 2009).

Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and OAS-2 (external shame) were entered. These variables accounted for a significant amount of variance in the PDI_D, $R^2 = .482$, $F(2, 32) = 14.864$, $p < .001$. The variables were then centred and an interaction term between IES-R and OAS-2 was computed (Aiken & West, 1991). This interaction term was entered into the regression model, and did not account for a significant proportion of the variance in PDI_D, $\Delta R^2 = .003$, $\Delta F(1, 31) = .189$, $p = .667$ (see Appendix X). External shame did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with unusual beliefs.

Does external shame moderate the relationship between centrality SM and PDI distress?

A moderation analysis was then conducted to examine whether external shame (OAS-2) moderated the relationship between the centrality properties of SMs (CES-S) and the distress associated with unusual beliefs (PDI_D).

Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). One case (2.9%) was found to have a standardised residual greater than 2, thus meeting Field's (2009) recommendation. Cook's distance (Cook & Weisberg, 1982) and examination of the standardised DFBeta revealed no cases greater than 1.

Moderation analysis: findings

In the first model, the CES-S (centrality features of SMs) and OAS-2 (external shame) were entered. These variables accounted for a significant amount of variance in the PDI_D, $R^2 = .420$, $F(2, 32) = 11.564$, $p < .001$. The variables were then centred and an interaction term between IES-R and OAS-2 was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was found not to account for a significant proportion of the variance in the PDI_D, $\Delta R^2 = .067$, $\Delta F(1, 31) = 4.016$, $p = .054$ (see Appendix X). These results indicate that external shame did not act as a moderator in the relationship between the centrality properties of SMs and the distress associated with unusual beliefs.

<u>Does internal shame moderate the relationship between centrality SM and PDI distress?</u>

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

Assumptions

The same assumptions were examined. Those that have not been mentioned are summarised below.

Outliers and influential cases

One case had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). Three cases (8.6%) were found to have standardised residuals greater than 2, exceeding Field's (2009) recommendation. Examination of the standardised DFBeta statistics revealed two cases greater than 1, and Cook's distance indicated that one case was greater than 1 (Cook & Weisberg, 1982). Following the recommendation from Agunis et al. (2015), the analysis was rerun without the outlier. Whilst the parameters decreased, the tests remained significant, thus the outlier was retained.

Moderation analysis: findings

In the first model, the CES-S (centrality features of SMs) and SCS (internal shame) were entered. These variables accounted for a significant amount of variance in the PDI_D, R^2 = .356, $F(2, 32) = 8.854$, p =.001. The variables were then centred and an interaction term between IES-R and OAS-2 was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was found not to account for a significant proportion of the variance in the PDI_D, ΔR^2 = .003, $\Delta F(1, 31) = .121$, p = .730 (see Appendix X). These results indicate that internal shame did not act as a moderator in the relationship between the centrality properties of SMs and the distress associated with unusual beliefs.

<u>Does external shame moderate the relationship between traumatic SM and PC distress?</u>

Assumptions

The assumptions that have not been covered in Section 3.9.1.1. are summarised below.

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). One case (2.9%) was found to have a standardised residual greater than 2, thus meeting Field's (2009) recommendation. All standardised DFBeta statistics and Cook's distances were below 1 (Cook & Weisberg, 1982).

Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and OAS-2 (external shame) were entered. These variables accounted for a significant amount of variance in the PC_D, R^2 = .496, $F(2, 32) = 15.763$, $p < .001$. The variables were then centred and an interaction term between IES-R and OAS-2 was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was found not to account for a significant proportion of the variance in the PC_D, $\Delta R^2 = .015$, $\Delta F(1, 31) = .926$, $p = .343$ (see Appendix X). Therefore, external shame did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with paranoia.

Does self-compassion moderate the relationship between traumatic SM and CAPS distress?

Assumptions

The necessary assumptions were examined and are summarised below.

Homoscedasticity, independent and normally distributed errors

The assumptions of linearity and homoscedasticity were met for all the following moderation analyses, as graph plots of the standardised residuals and predicted values (see Appendix W) demonstrated that the majority of residuals were evenly distributed and fell between -2 and 2 (e.g., Tabachnick & Fidell, 2012). In addition, the Durbin-Watson test was close to ideal the value of two (1.3 - 2.2) for all following analyses.

Multicollinearity

Multicollinearity was not considered an issue for any of the following moderation analyses as the VIF values were all below ten (1.0) and the tolerance statistics were all above .1. (.98).

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). One case (2.9%) was found to have a standardised residual greater than 2, thus meeting Field's (2009) recommendation. One standardised

DFBeta statistic was slightly greater than 1 (1.3), however all Cook's distances were below 1 (Cook & Weisberg, 1982).

Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and S-cS (self-compassion) were entered. These variables accounted for a significant amount of variance in the CAPS_D, R^2 = .438, $F(2, 32) = 12.458$, $p < .001$. The variables were then centred and an interaction term between IES-R and S-cS was computed (Aiken & West, 1991). This interaction term was entered into the regression model, and did not account for a significant proportion of the variance in the CAPS_D, ΔR^2 = .029, $\Delta F(1, 31) = 1.658$, p = .207 (see Appendix X). Self-compassion did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with unusual experiences.

<u>Does self-compassion moderate the relationship between traumatic SM and PDI distress?</u>

Assumptions

The same assumptions were examined. Those that have not been mentioned are summarised below.

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). Two cases (5.7%) were found to have standardised residuals greater than 2, slightly exceeding Field's (2009) recommendation. However, Cook's distance (Cook & Weisberg, 1982) revealed no cases greater than 1 and only one standardised DFBeta statistics was slightly greater than 1 (1.2), indicating that no cases has a large influence on the model (Field, 2009).

Moderation analysis: findings

In the first model, the IES-R (traumatic features of SMs) and S-cS (self-compassion) were entered. These variables accounted for a significant amount of variance in the PDI_D, R^2 = .432, $F(2, 32) = 13.916$, p <.001. The variables were then centred and an interaction term between IES-R and S-cS was computed (Aiken & West, 1991). This interaction term was entered into the

regression model, and did not account for a significant proportion of the variance in the PDI_D, $\Delta R^2 = .014$, $\Delta F(1, 31) = .825$, $p = .371$ (see Appendix X). Self-compassion did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with unusual beliefs.

Does self-compassion moderate the relationship between centrality SM and PDI distress?

Assumptions

The same assumptions were examined. Those that have not been mentioned are summarised below.

Outliers and influential cases

No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). Two cases (5.7%) were found to have standardised residuals greater than 2, slightly exceeding Field's (2009) recommendation. However, all standardised DFBeta statistics and Cook's distances were below 1 (Cook & Weisberg, 1982).

Moderation analysis: findings

In the first model, the CES-S (centrality features of SMs) and S-cS (self-compassion) were entered. These variables accounted for a significant amount of variance in the PDI_D, $R^2 = .345$, $F(2, 32) = 8.427$, $p = .001$. The variables were then centred and an interaction term between CES-S and S-cS was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was not found to account for a significant proportion of the variance in the PDI_D, $\Delta R^2 = .005$, $\Delta F(1, 31) = .246$, $p = .623$ (see Appendix X). These results indicate that self-compassion did not act as a moderator in the relationship between the centrality properties of SMs and the distress associated with unusual beliefs.

Does self-compassion moderate the relationship between traumatic SM and PC distress?

Assumptions

The same assumptions were examined. Those that have not been mentioned are summarised below.

Outliers and influential cases

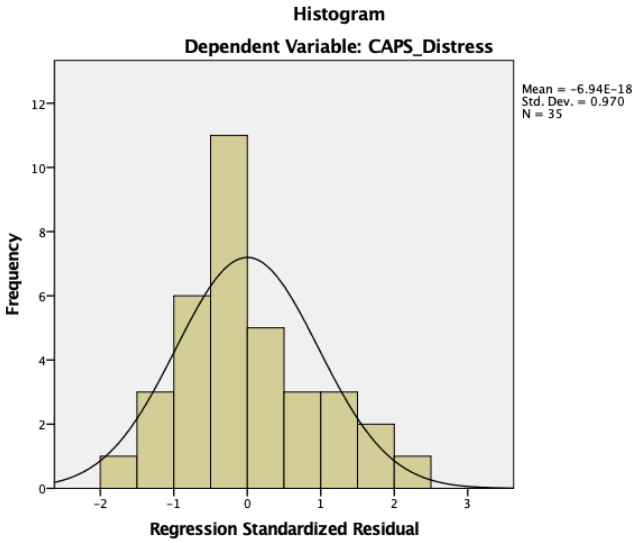
No cases had a Mahalanobis (1936) distance score greater than 11 (Barnett & Lewis, 1978). One case (2.9%) was found to have a standardised residual greater than 2, thus meeting Field's (2009) recommendation. All standardised DFBeta statistics and Cook's distances were below 1 (Cook & Weisberg, 1982).

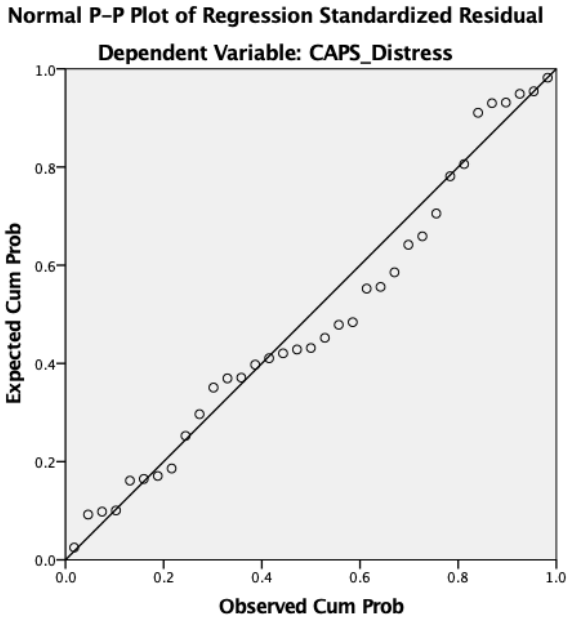
Moderation analysis: findings

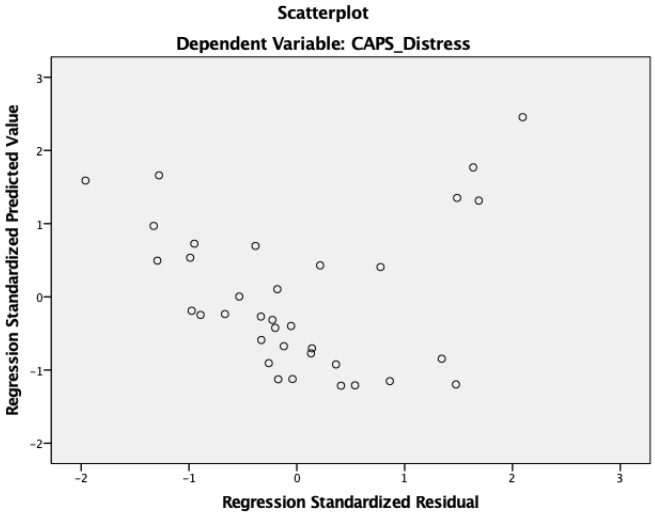
In the first model, the IES-R (traumatic features of SMs) and S-cS (self-compassion) were entered. These variables accounted for a significant amount of variance in the PC_D, R^2 = .343, $F(2, 32) = 8.367$, p = .001. The variables were then centred and an interaction term between IES-R and S-cS was computed (Aiken & West, 1991) to avoid potentially problematic high multicollinearity with the interaction term. This interaction term was entered into the regression model, and was not found to account for a significant proportion of the variance in the PC_D, ΔR^2 = .016, $\Delta F(1, 31) = .763$, p = .389 (see Appendix X). These results indicate that self-compassion did not act as a moderator in the relationship between the traumatic properties of SMs and the distress associated with paranoia.

Appendix W: Moderation Analyses Assumption Tests

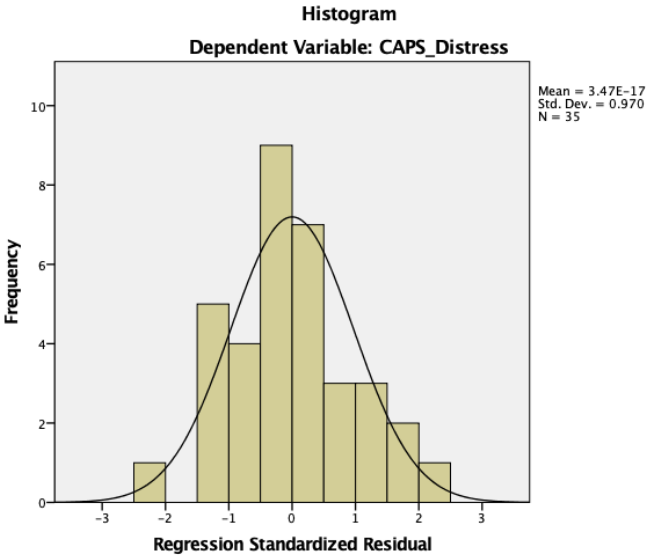
SCS and IES-R on CAPS_D

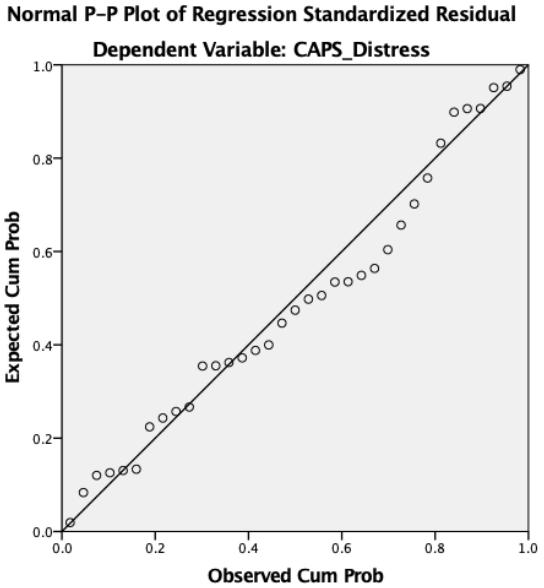


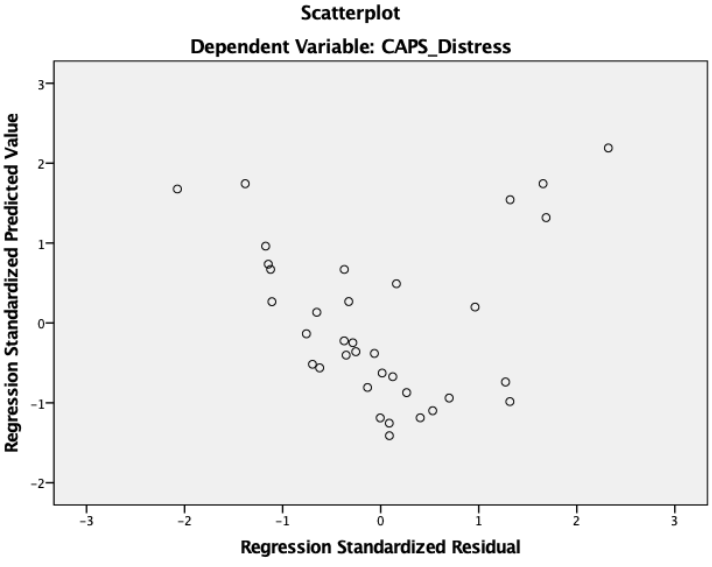




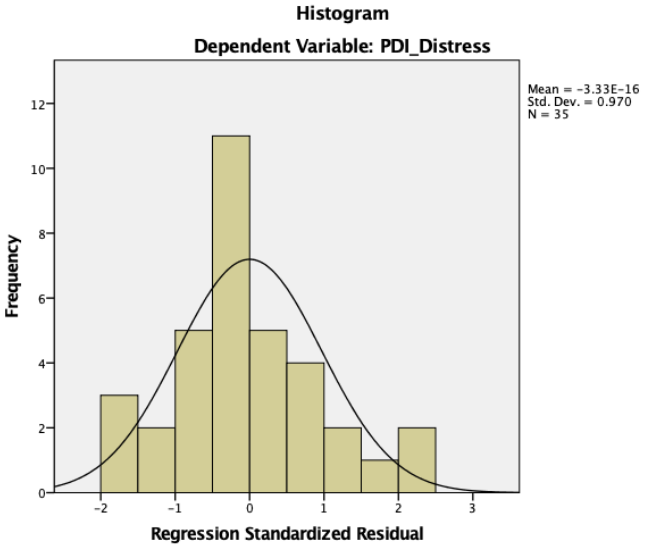
OAS and IES-R on CAPS_D

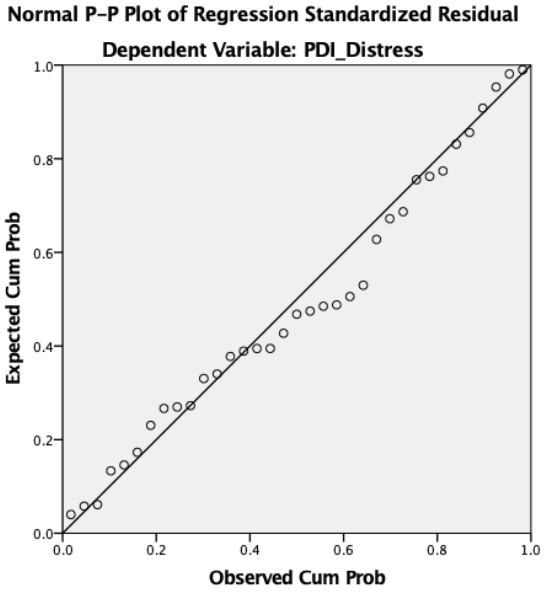


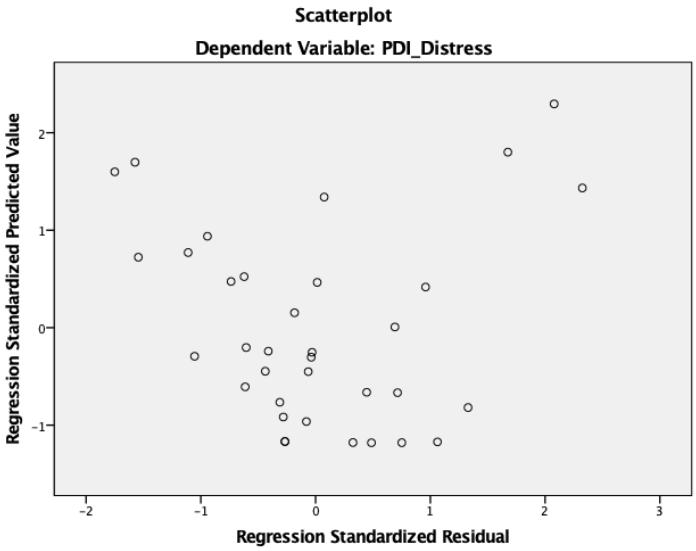




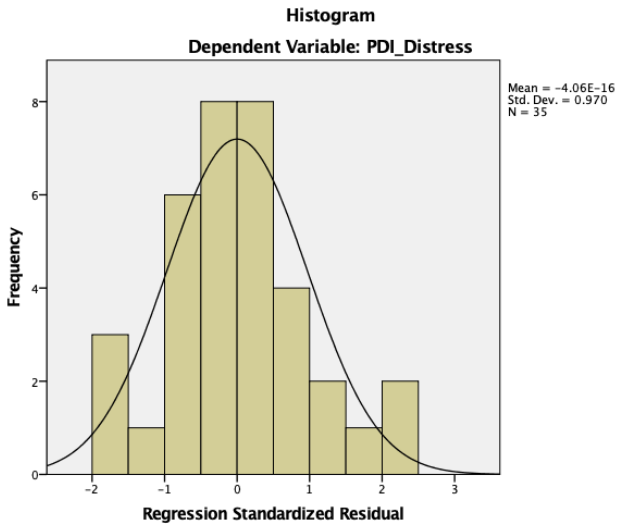
SCS and IES-R on PDI_D

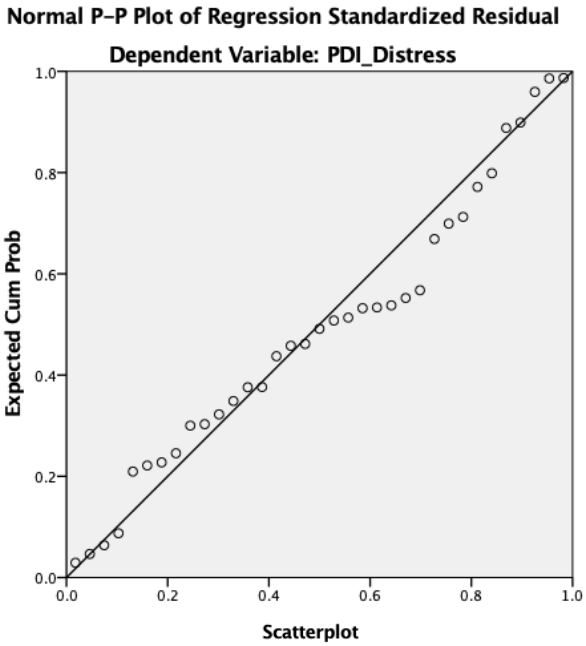


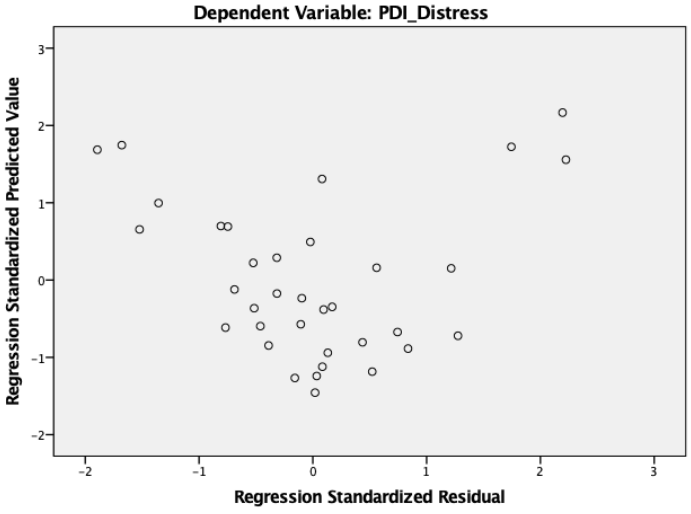




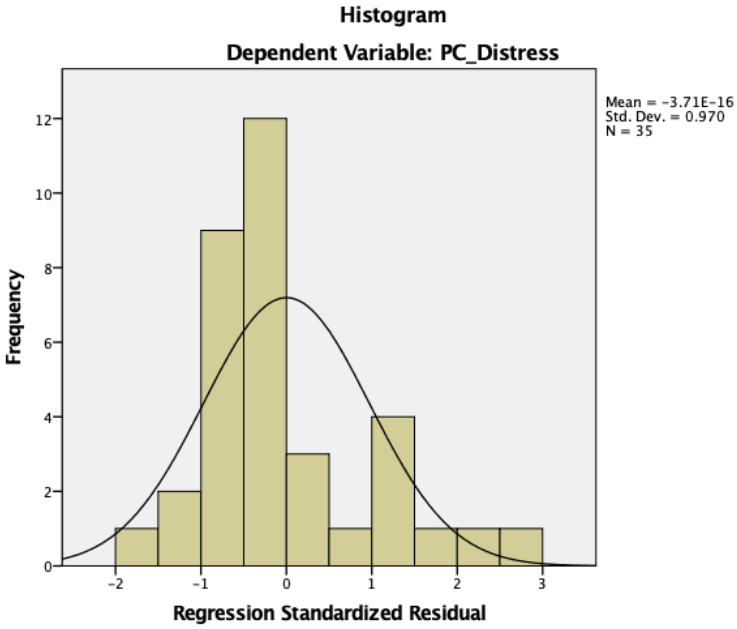
OAS and IES-R on PDI _D

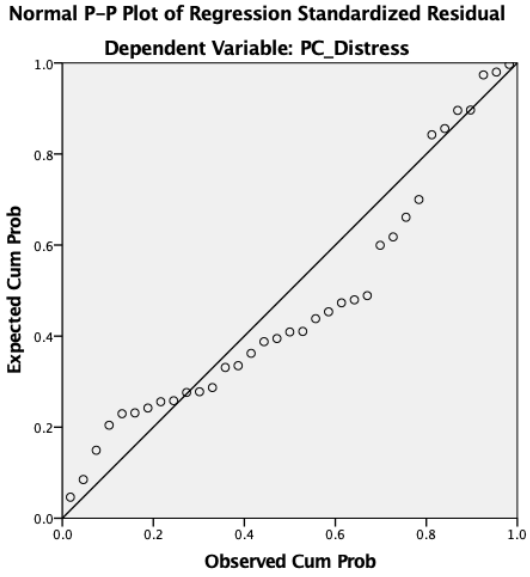


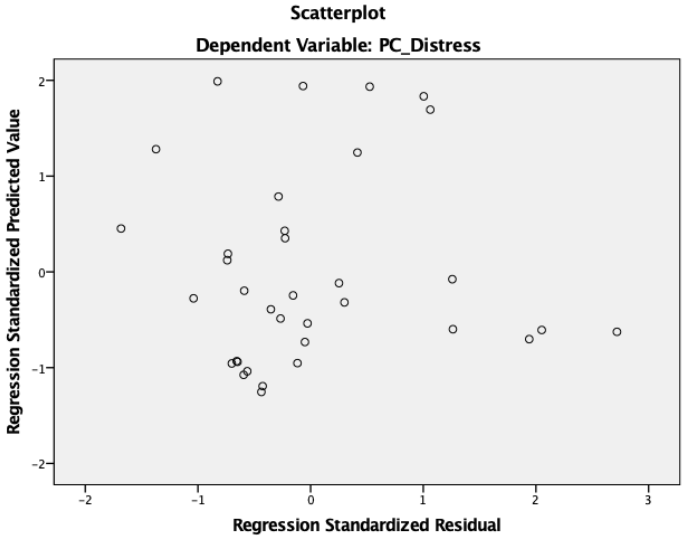


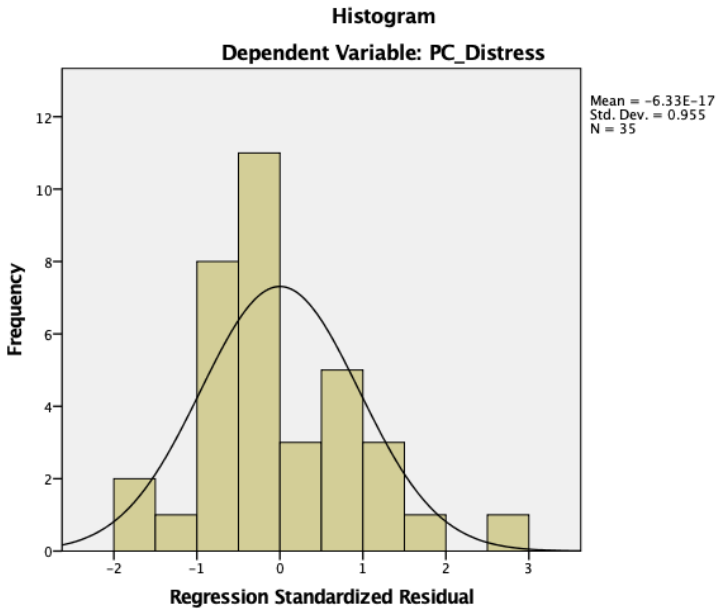


SCS and IES-R on PC_D





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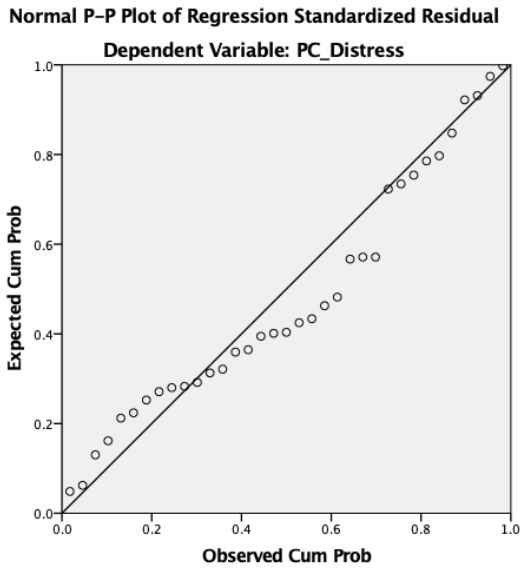
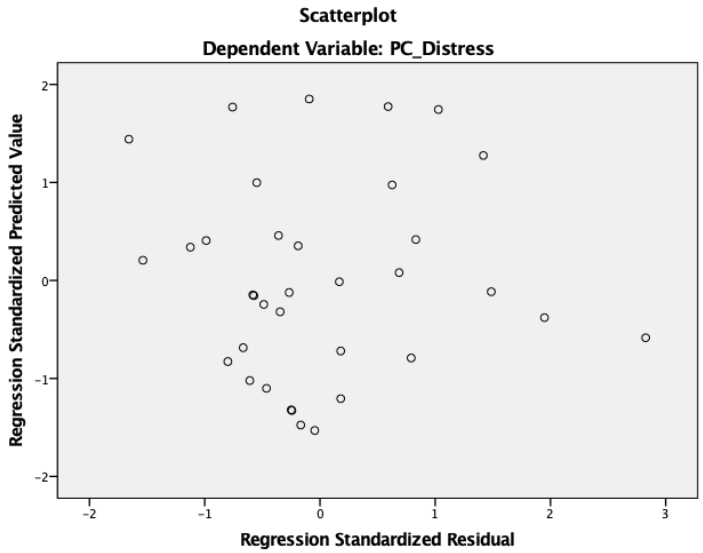
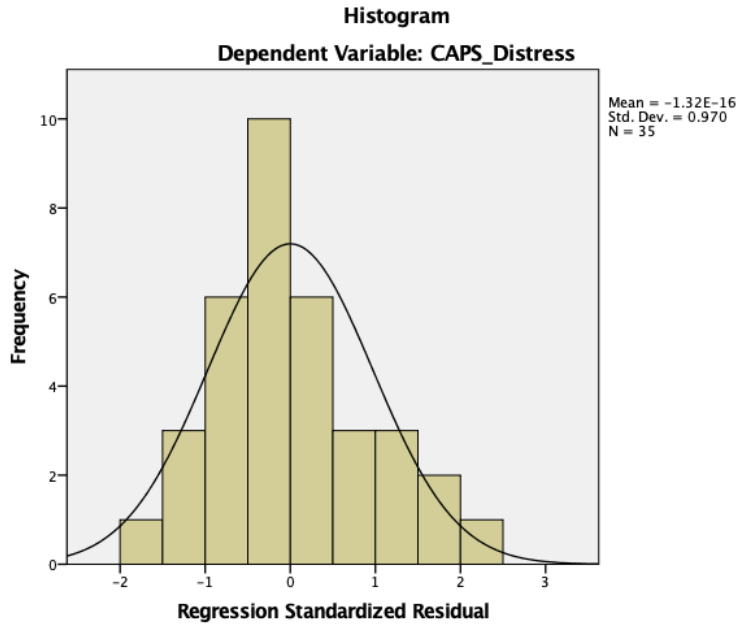
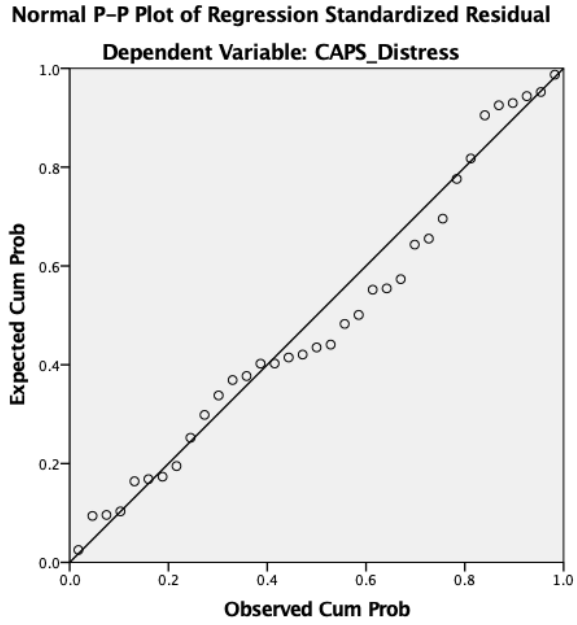
Std. Dev. = 0.955
N = 35
Frequency
Regression Standardized Residual

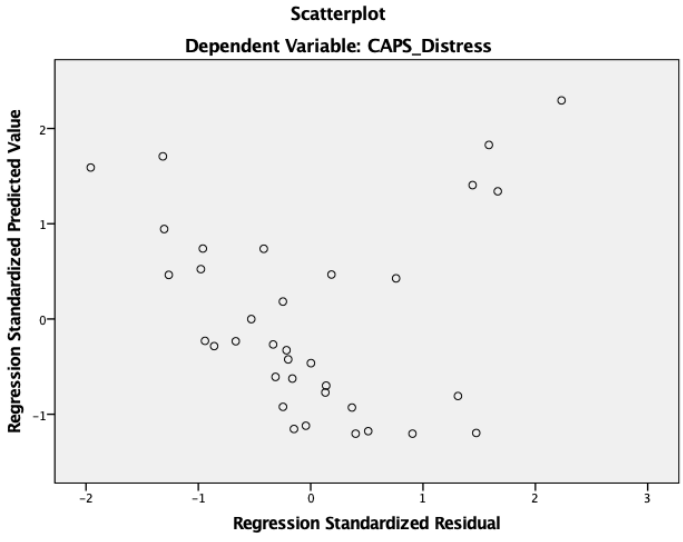

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: PC_Distress
Expected Cum Prob
Observed Cum Prob


Scatterplot
Dependent Variable: PC_Distress
Regression Standardized Predicted Value
Regression Standardized Residual

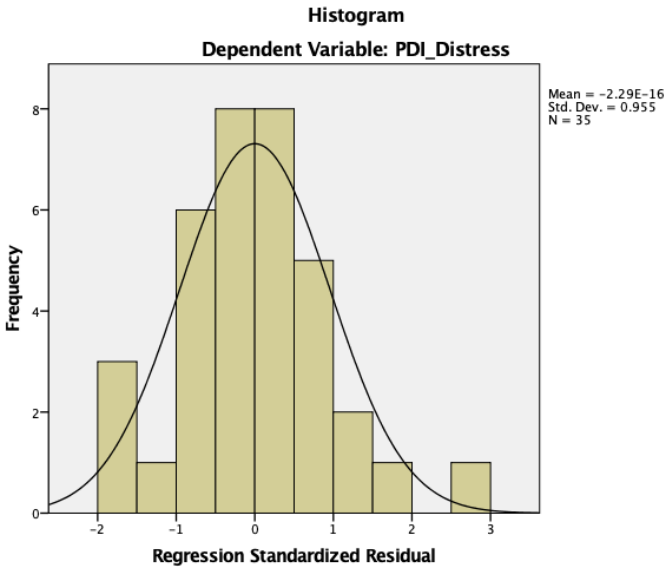
ScS and IES-R on CAPS_D

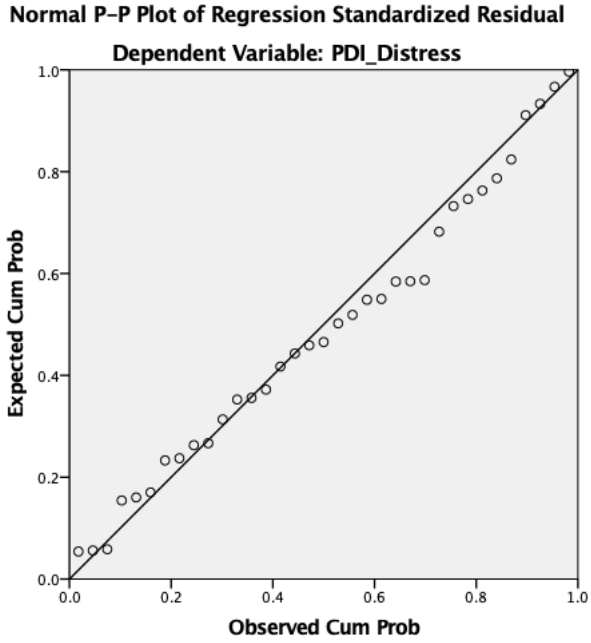


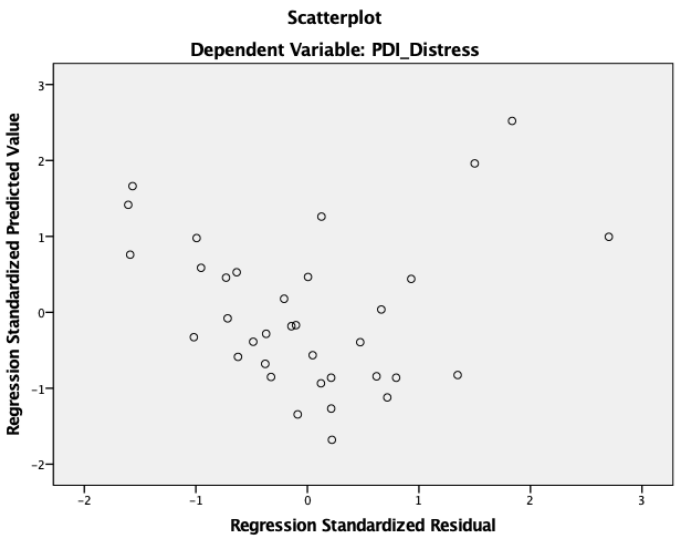




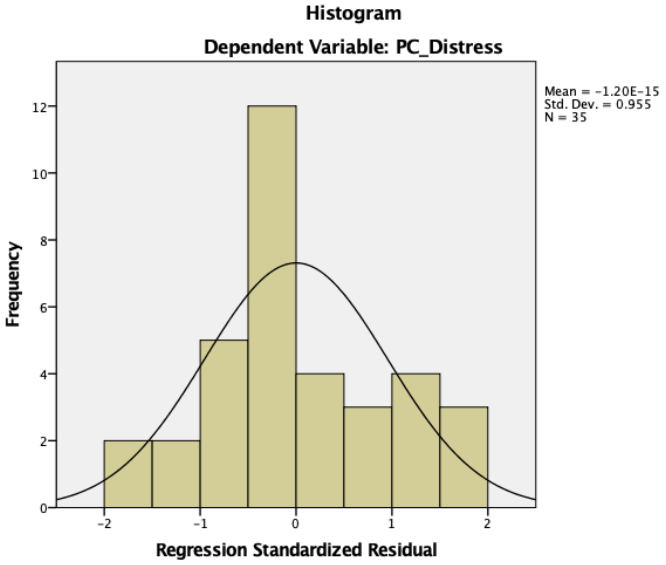
ScS and IES-R on PDI_D

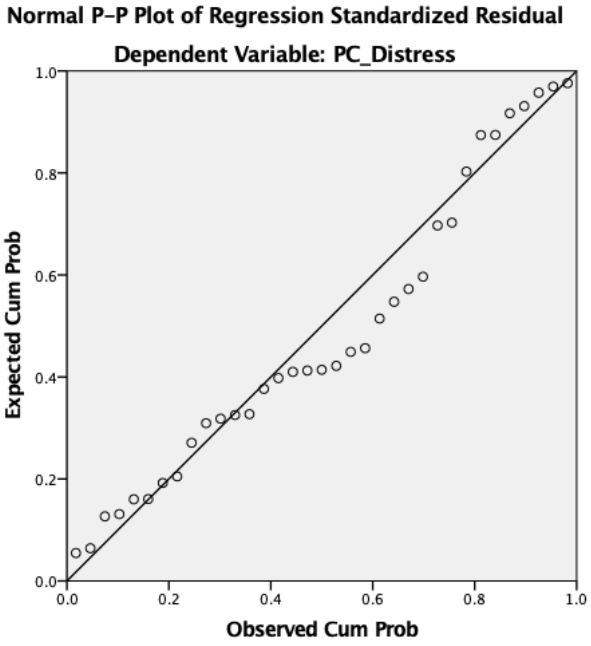


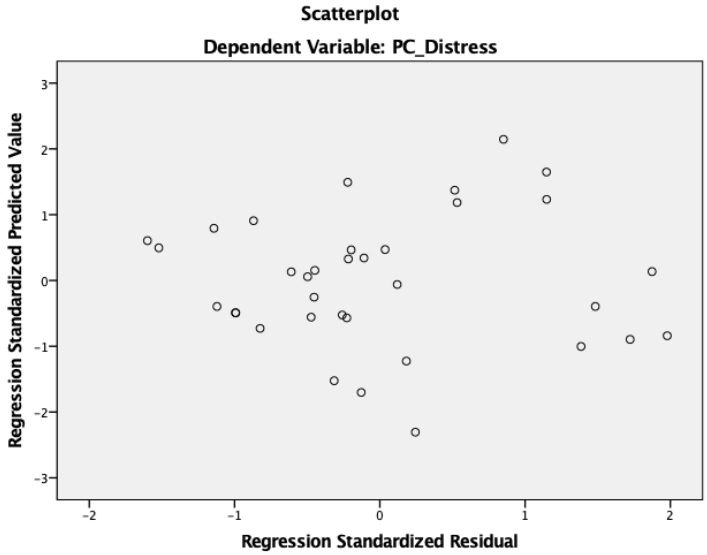




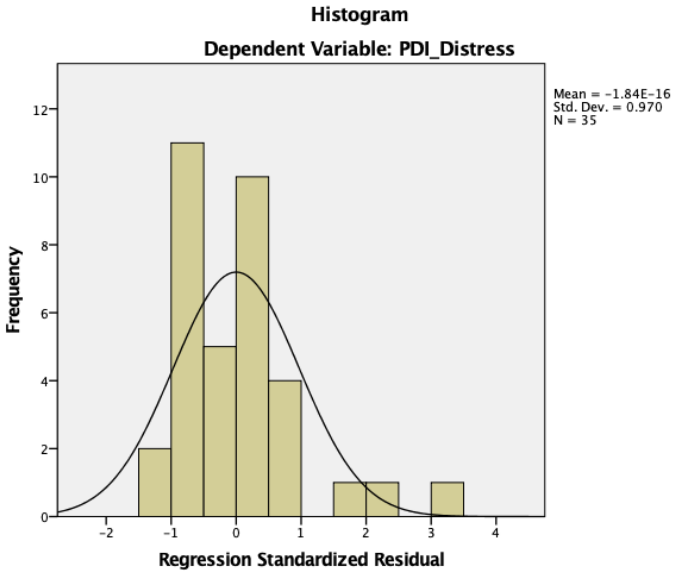
ScS and IES-R on PC_D

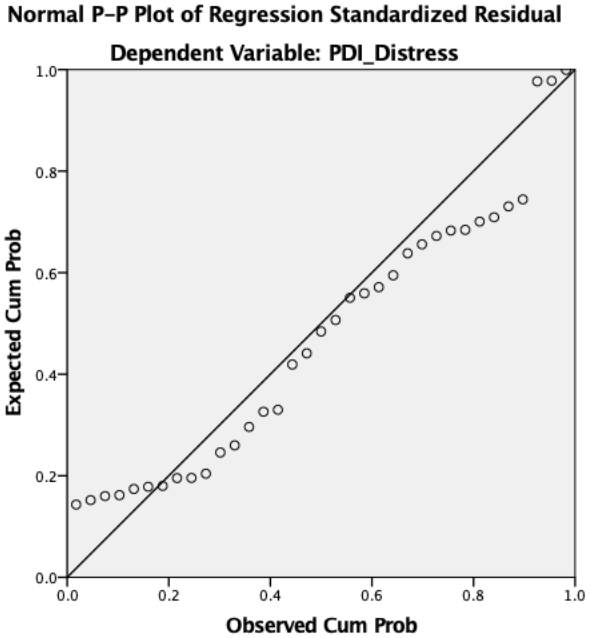


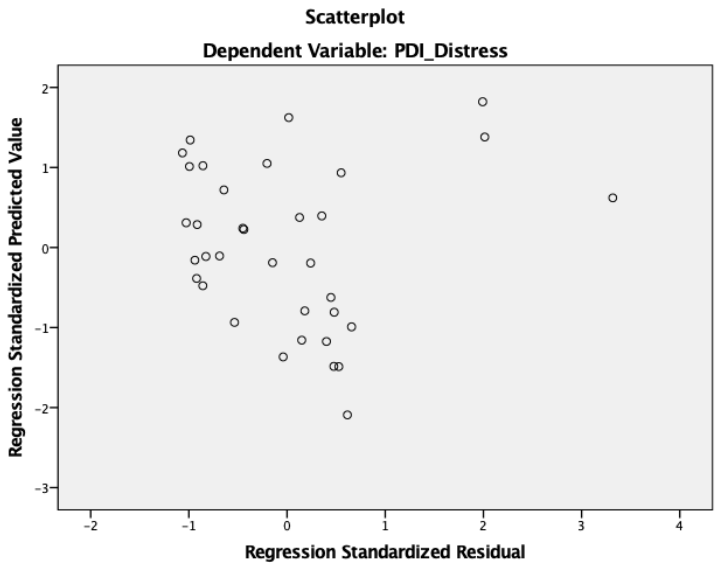




S-cS and CES-S on PDI_D







Appendix X: SPSS output for moderation analyses

Table X1. Moderation analysis for traumatic properties of shame memories and internal shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.662[a]	.439	.404	29.598	.439	12.502	2	32	.000
2	.713[b]	.508	.461	28.138	.070	4.406	1	31	.044

a. Predictors: (Constant), SCS_Total, IoES Total

b. Predictors: (Constant), SCS_Total, IoES Total, interaction_IoESxSCS

c. Dependent Variable: CAPS_Distress

Table X2: Moderation analysis for traumatic properties of shame memories and external shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.671[a]	.450	.415	29.305	.450	13.074	2	32	.000
2	.679[b]	.461	.408	29.476	.011	.630	1	31	.433

a. Predictors: (Constant), OAS2_Total, IoES Total

b. Predictors: (Constant), OAS2_Total, IoES Total, interaction_IoESxOAS_2

c. Dependent Variable: CAPS_Distress

Table X3: Moderation analysis for traumatic properties of shame memories and internal shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.680[a]	.463	.429	18.852	.463	13.775	2	32	.000
2	.735[b]	.540	.495	17.722	.077	5.213	1	31	.029

a. Predictors: (Constant), SCS_Total, IoES Total

b. Predictors: (Constant), SCS_Total, IoES Total, interaction_IoESxSCS

c. Dependent Variable: PDI_Distress

Table X4: Moderation analysis for traumatic properties of shame memories and external shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.694[a]	.482	.449	18.517	.482	14.864	2	32	.000
2	.696[b]	.485	.435	18.756	.003	.189	1	31	.667

a. Predictors: (Constant), OAS2_Total, IoES Total

b. Predictors: (Constant), OAS2_Total, IoES Total, interaction_IoESxOAS_2

c. Dependent Variable: PDI_Distress

Table X5: Moderation analysis for centrality properties of shame memories and external shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.648[a]	.420	.383	19.594	.420	11.564	2	32	.000
2	.697[b]	.486	.436	18.731	.067	4.016	1	31	.054

a. Predictors: (Constant), CES_Total, OAS2_Total

b. Predictors: (Constant), CES_Total, OAS2_Total, interaction_CESxOAS_2

c. Dependent Variable: PDI_Distress

Table X6: Moderation analysis for centrality properties of shame memories and internal shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.597[a]	.356	.316	20.634	.356	8.854	2	32	.001
2	.599[b]	.359	.297	20.924	.003	.121	1	31	.730

a. Predictors: (Constant), SCS_Total, CES_Total

b. Predictors: (Constant), SCS_Total, CES_Total, interaction_CESxSCS

c. Dependent Variable: PDI_Distress

Table X7: Moderation analysis for traumatic properties of shame memories and external shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.704[a]	.496	.465	14.742	.496	15.763	2	32	.000
2	.715[b]	.511	.464	14.759	.015	.926	1	31	.343

a. Predictors: (Constant), OAS2_Total, IoES Total

b. Predictors: (Constant), OAS2_Total, IoES Total, interaction_IoESxOAS_2

c. Dependent Variable: PC_Distress

Table X8: Moderation analysis for traumatic properties of shame memories and internal shame: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.570[a]	.325	.283	17.059	.325	7.718	2	32	.002
2	.637[b]	.405	.348	16.272	.080	4.172	1	31	.050

a. Predictors: (Constant), SCS_Total, IoES Total

b. Predictors: (Constant), SCS_Total, IoES Total, interaction_IoESxSCS

c. Dependent Variable: PC_Distress

*Table X9: M*oderation analysis for traumatic properties of shame memories and self-compassion: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.662[a]	.438	.403	29.621	.438	12.458	2	32	.000
2	.683[b]	.466	.415	29.321	.029	1.658	1	31	.207

a. Predictors: (Constant), SelfCS_Total, IoES Total

b. Predictors: (Constant), SelfCS_Total, IoES Total, interaction_ScSxIoES

c. Dependent Variable: CAPS_Distress

Table X10: Moderation analysis for traumatic properties of shame memories and self-compassion: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.682[a]	.465	.432	18.808	.465	13.916	2	32	.000
2	.692[b]	.479	.429	18.859	.014	.825	1	31	.371

a. Predictors: (Constant), SelfCS_Total, IoES Total

b. Predictors: (Constant), SelfCS_Total, IoES Total, interaction_ScSxIoES

c. Dependent Variable: PDI_Distress

*Table X11: M*oderation analysis for centrality properties of shame memories and self-compassion: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.587[a]	.345	.304	20.814	.345	8.427	2	32	.001
2	.592[b]	.350	.287	21.063	.005	.246	1	31	.623

a. Predictors: (Constant), CES_Total, SelfCS_Total

b. Predictors: (Constant), CES_Total, SelfCS_Total, interaction_ScSxCES

c. Dependent Variable: PDI_Distress

Table X12: Moderation analysis for traumatic properties of shame memories and self-compassion: model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.586[a]	.343	.302	16.831	.343	8.367	2	32	.001
2	.599[b]	.359	.297	16.894	.016	.763	1	31	.389

a. Predictors: (Constant), IoES Total, SelfCS_Total

b. Predictors: (Constant), IoES Total, SelfCS_Total, interaction_ScSxIoES

c. Dependent Variable: PC_Distress

Appendix Y: AMQ items

AMQ item	This study	Matos & Pinto-Gouveia's (2016) study
Story	M = 4.20, SD = 2.32	M = 4.18, SD = 1.58
Emotions	M = 4.37, SD = 2.10	M= 4.01, SD = 1.69
Message/anchor	M = 4.54, SD = 1.93	M = 3.98, SD = 1.71
Subject	M = 4.09, SD = 2.33	M = 4.01, SD = 1.59
Setting	M = 5.40, SD = 1.82	M = 4.54, SD = 1.75

AMQ item	This study	Matos & Pinto-Gouveia's (2016) study
In words	M = 3.57, SD = 1.91	M = 3.86, SD = 1.60
Talk	M = 3.26, SD = 2.36	M = 3.60, SD = 1.63
Reliving	M = 3.57, SD = 1.80	M = 4.27, SD = 1.44
Hear	M = 3.51, SD = 2.09	M = 3.94, SD = 1.68
See	M = 4.43, SD = 1.93	M = 4.55, SD = 1.64