

The Mediating Role of Adult Attachment and Social Connectedness in the Relationship
Between Perceived Parenting Behaviours During Childhood and Compassion.

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Abstract

Background

The current compassion literature has shown that self-compassion can positively affect well-being and mental health. Research suggests that the origins of compassion likely begin in the early years of relationships with primary caregivers. However, little is known about what may affect this relationship and, therefore, the complexity of individual differences in compassion.

The primary aim was to investigate the mediating role of adult attachment and social connectedness in the relationship between perceived parenting during childhood and compassion. A pilot study was also conducted to see if a self-directed online intervention would increase self-compassion scores.

Method

A series of studies applied a quantitative methodology through self-report questionnaires. Participants were asked questions including demographic information, compassion, perceived parenting in childhood, adult attachment, and social connectedness. For the longitudinal study, an online intervention was delivered via an auditory file and the data was collected through online questionnaires.

Results

Attachment anxiety and social connectedness mediated the relationship between perceived parenting, particularly between maternal rejection and self-compassion. In the serial mediation models, the small increase of variance in compassion suggests attachment anxiety and social connectedness may be competing against each other or an unknown factor in this relationship. For the intervention study, there was not much improvement after the intervention. There were

differences in the results for both parents, which suggests that the parenting roles of the father and mother predict the relationship with compassion.

Conclusion

Attachment anxiety and social connectedness mediated the relationship between perceived parenting and compassion. However, more research is needed to understand the relationship between adult attachment and social connectedness. By exploring the variance in compassion gives us a greater understanding of individual differences in self-compassion and may contribute to a greater understanding of how individuals can develop greater compassion and, therefore, better well-being and mental health.

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Chapter One

Introduction

1.1 Chapter Introduction

This chapter explores the theoretical concept of compassion and the current literature on the subject. It examines different dimensions of compassion, such as compassion for oneself, compassion for others, receiving compassion and fears of compassion. In conjunction with the different dimensions of compassion, the way in which an individual's perception of their childhood parenting, adult attachment style and social connectedness impact on the dimensions of compassion are also investigated.

1.2 Chapter Overview

The broad consensus about the meaning of 'compassion' in the literature is that compassion involves feeling for a person who is suffering and having the motivation to help them (Goetz et al., 2010; Lazarus, 1991). Similarly, according to the current Oxford English Dictionary, (2023) "compassion" is the feeling or emotion for another person with a desire to alleviate suffering. It is assumed that compassion and self-compassion are closely related concepts Neff (2011a) argues that having compassion for oneself is no different to having compassion for others. For example, you would have to notice suffering in yourself in order to feel self-compassion as you would to feel compassion for another person. However, Lopez et al. (2018) suggest that, although they both involve kindness, for example, the ability to notice suffering, they differ in terms of their purpose. Most people have a tendency to feel compassion for others rather than for themselves.

Lopez et al. (2018) also speculate that compassion may have evolved due to the need for social well-being, while self-compassion could be seen as more of an individual experience concerned

with personal well-being. Nevertheless, both seem to have a connection with positive emotions. Research shows that compassion for ourselves is connected with our caregiving experiences as children (Bowlby, 1979) and can continue into adulthood, shaping our adult romantic and social relationships (Hazan & Shaver, 1987). Therefore, it is deemed meaningful in this thesis to explore the different concepts of compassion separately as well as their relationships to parenting, adult attachment, and social connectedness.

1.3 Background

1.3.1 Overview of Self-Compassion

Research on the concept of self-compassion is relatively new in Westernised psychology and has only become prevalent during the last few decades (Yarnell et al., 2015). Influenced by Eastern traditions, the Buddhist philosophy of compassion promotes the importance of compassion for oneself and others (Neff, 2011a; Neff, 2003a; Kang & Whittingham, 2010). Compassion involves recognising and acknowledging suffering, and if an individual feels kindness towards others who are suffering, there may be a desire to support them. Self-compassion involves the same desire but directed towards oneself (Neff, 2011a).

Much of the evidence regarding self-compassion has a strong association with mental health and psychological and emotional well-being (Neff, 2003a; Neff, 2003b; Neff, 2007; Neff & Vonk, 2009; Leary et al., 2007; MacBeth & Gumley, 2012; Neely et al., 2009; Zessin et al., 2015). It is well known that there are links between an individual's resilience to negative events (Leary et al., 2007) and increased motivation, health behaviours, and body image (Albertson et al., 2014; Allen et al., 2012).

Self-compassion is also associated with positive life satisfaction, happiness, social connectedness, greater relationship satisfaction and emotional intelligence (Barnard & Curry, 2011; Neff & Beretvas, 2013; Neff, 2011b) and fewer negative emotions, such as embarrassment, irritability, sadness (Leary et al., 2007) stress (Gilbert et al., 2011a; Allen & Leary, 2010) and anger (Neff & Vonk, 2009). Greater self-compassion is negatively associated with self-criticism, depression, anxiety, rumination and thought suppression (Neff, 2003b; Gilbert & Irons, 2005; Leary et al., 2007).

MacBeth and Gumley (2012) conducted a meta-analysis of fourteen publications examining the association between self-compassion and psychopathology and found that self-compassion was associated with lower levels of mental health symptoms; mainly depression, anxiety and stress. Brown and Ryan (2003) suggested that high levels of self-compassion may act as a safeguard against mental health symptoms. MacBeth and Gumley's (2012) meta-analysis demonstrated that higher levels of compassion were associated with lower levels of mental health symptomology. This supports Neff's (2003b), argument that self-compassion is associated with an increase in well-being that reflects lower levels of depression and anxiety and greater life satisfaction.

Self-compassion is believed to be positively associated with well-being (Neely et al., 2009), self-reported life satisfaction (Neff, 2003b; Neff et al., 2005) and self-reported happiness (Neff et al., 2007a; Neff & Vonk, 2009). Neely and colleagues (2009) regard well-being as entailing having a sense of purpose in life, a sense of self-mastery, low perceived stress levels and low negative affect, together with high levels of satisfaction with life. Self-compassion may help an individual to understand their feelings and ability to regulate their mood through emotional regulation and emotional intelligence (Barnard & Curry, 2011) and to treat their negative

feelings with kindness and a sense of common humanity (Neff, 2003a). Neff and Pommier (2012) extend this theory by arguing that individuals with higher levels of self-compassion experience enhanced empathic concern, altruism and compassion for others. Lee and Robbins (1998) report higher perceived connectedness to others, which was associated with low anxiety, while Gilbert (2005) suggests that self-compassion can improve well-being when individuals feel cared for, connected to others and emotionally calm.

Much of the evidence about self-compassion has a strong association with mental health and well-being (Leary et al., 2007; MacBeth & Gumley, 2012; Neff et al., 2007; Neff & Vonk, 2009), regardless of gender, age or culture (Akin, 2010; Allen & Leary, 2014; Arimitsu, 2014; Choi et al., 2014; Neff et al., 2008). The evidence suggests that a protective factor may come into play in relation to the experience of negative emotions and promoting greater well-being. Hence, it is important to gain further understanding of the concept of self-compassion, due to the possible benefits that could be gained by a wide range of population groups.

1.4 Theories of self-compassion

The two main theories about self-compassion are Kristin Neff's (2003a) Self-compassion Theory and Paul Gilbert's (2010) Compassionate Mind Theory. Although there is some overlap between these two constructs, Neff's (2003b) theory has its roots in social psychology, which emphasises the awareness and understanding of self-compassion. In contrast, Gilbert's (2010) theory originates from an evolutionary approach focusing on the development of self-compassion. Both of these theories are outlined in the following sections.

1.4.1 Self-Compassion Theory

Neff and McGehee (2010, p. 226) define self-compassion as ‘the ability to hold one’s feelings of suffering from a sense of warmth, connection and concern’. This model of Self-Compassion allows individuals to acknowledge mistakes and weaknesses and enables them to change unhelpful behaviours and set new goals rather than criticising their previous failures (Neff, 2009). Neff’s (2003b) model of self-compassion comprises three central components: Self-kindness vs Self-judgement; Common Humanity vs Isolation; and Mindfulness vs Over-identification.

1.4.1.1 Self-kindness vs Self-judgement

Self-kindness refers to treating oneself with care and understanding in times of difficulty and suffering rather than judging oneself harshly, as well as actively soothing and comforting oneself (Neff, 2009). Self-compassion involves the recognition that experiencing adversity, imperfection, and failure is inevitable, but that if this is denied or resisted, frustration and self-criticism may increase (Neff, 2003a). People who are self-judgemental have feelings of hostility, deprecation and criticism towards themselves, and a tendency to reject their feelings, thoughts and worth as a person (Brown, 1998). Western culture places a strong emphasis on being kind to others who are suffering, and when this is recognised, there is often a desire to help people. However, with regard to oneself, self-judgement often feels more natural (Brown, 1999). Neff claims that self-kindness is not a response that is culturally valued. She also suggests that, sadly, many people believe that they should not be kind to themselves, especially those who have received harsh criticism in childhood (Neff, 2011a). Neff (2003a) argues that self-criticism is the opposite of self-kindness. The origins of self-criticism may come from children having no choice but to rely on their parents to keep them safe and protect them when they face a difficult challenge. Over-controlling and restrictive parenting, and a lack of warmth

from parents, are parenting styles that are consistently associated with the development of self-criticism in children (Campos et al., 2010). These parenting styles associated with self-criticism are also connected with a fearful-avoidant attachment style (Zuroff & Fitzpatrick, 1995).

Bowlby (1988) proposed that, if the parent or primary caregiver(s) acknowledge the child's need for comfort and protection whilst still allowing the child the independence to explore the environment, and keep repeating this process, the child will be likely to develop an 'internal working model' of self that is seen as true and reliable (Neff, 2003a). According to attachment theory, parents provide either a safe haven or a 'secure base' which facilitates the development of personal qualities, such as emotional resilience (Mikulincer & Shaver, 2005). Conversely, if a child does not receive comfort and the freedom to explore but instead experiences harsh, critical responses and coldness when they feel challenged by life, they are more likely to form an insecure base and to develop an internal working model of the self as being unworthy or incompetent (Bowlby, 1969). The message that the child learns is that they are somehow bad and incapable, and that self-criticism will prevent them from repeating their mistakes. Consequently, they are less likely to relate to themselves with self-kindness (Neff, 2011a) but rather with self-judgement, which can be relentless (Whelton & Greenberg, 2005) and can often exceed the discomfort caused by a particular situation.

Self-compassion involves being kind and understanding towards ourselves during times of suffering. Self-judgement stands in stark contrast to self-kindness. Self-judgement involves taking a self-critical approach towards ourselves by blaming ourselves when we are suffering (Neff & Beretvas, 2012) instead of self-soothing and comforting ourselves in times of distress (Gilbert, Baldwin, Irons, Baccus & Palmer, 2006). Gilbert and Irons (2005) suggest that developing greater self-kindness involves becoming more aware of self-judgment and self-

criticism and their impact on ourselves. Neff (2011b) concurs with Gilbert and Irons' (2005) theory but emphasises that engaging in self-kindness does not mean stopping self-judgment but rather being more aware of the need to comfort ourselves. Early significant relationships can have an impact on self-to-self relating (Irons et al., 2006) and, consequently, this affects an individual's approach during times of suffering. An individual's significant early interpersonal experiences and relationships can be internalised and form the basis of self-to-self relating, leading to a psychological capacity to experience happiness or misery in life. Therefore, if a child experiences a consistently safe and nurturing relationship during infancy, they are more likely to be emotionally regulated when they face a threat. They will have a greater capacity to self-soothe and, ultimately, greater self-compassion (Neff, 2003a).

1.4.1.2 Common Humanity vs Isolation

This component of Neff's (2003a) self-compassion theory involves a person recognising their own experience as part of a larger and shared human experience and accepting that life is imperfect and all humans are fallible (Neff, 2009). It acknowledges that everyone experiences problems and challenges and that it is not just something that happens to them. Buddhism emphasises that humans are all intimately connected and ultimately long for connection (Brown, 1999). By definition, compassion is relational, and it means 'to suffer with' (Neff, 2011a). Neff (2003a) states that an awareness of common humanity results in being less judgemental of personal failure and recognising the need to forgive oneself for being human. Maslow (1954) argues that, for individual growth and happiness to occur, a person must first have their most basic need of human connection met. Like feelings of kindness, these feelings of connectedness activate the brain's attachment system. Those who feel connected to others are less likely to feel frightened when faced with difficult life events (Neff, 2011a).

In times of pain and suffering, many individuals do not relate to what they have in common with others. Instead, they isolate and disconnect themselves from others and, because they feel that they are alone in their suffering, try to hide their failures and inadequacies (Barnard & Curry, 2011). Neff and McGehee (2010) found that self-compassion was positively associated with social connectedness among adolescents and young adults and proposed that we must be aware of our connectedness to the human experience, which can help to keep our emotions in perspective. In times of pain and suffering, we may still suffer but with a sense of common humanity which will not be intensified by isolation and separation (Neff, 2011a).

1.4.1.3 Mindfulness vs Over-identification

The third central component of Neff's self-compassion theory is mindfulness. Mindfulness involves an individual having a clear and balanced experience of themselves rather than extremes of over-identifying with the negative aspects of the self. Mindfulness is the awareness and non-judgmental acceptance of what is happening in the present and allowing ourselves to see the situation from a greater perspective (Shapiro et al., 2005; Shapiro et al., 2007). Mindfulness gives us a chance to respond rather than react to a situation or thought (Kabat-Zinn, 2003), thereby enabling us to stop resisting reality and learn from the present moment (Neff, 2003a).

Neff (2011b) uses the term "over-identification" to describe the process whereby emotional reactions become so consuming and extreme that there is no mental space to step back and objectively observe what is happening. Extreme reactions or over-reactions are common when the sense of self is involved. If an individual is mindful and, therefore, more compassionate, they may have a more balanced awareness that avoids over-identification with their emotions and have more mental space for a mindful state of awareness. However, Neff (2003a) points

out that self-compassion does not lead to passivity or inaction. Rather, mindfulness gives us the awareness to take proactive steps that may improve our situation, allowing us to distinguish between things that can be changed and things that cannot. If they relate to mindfulness, an individual is better positioned to consider what they will do next (Neff, 2011a).

As previously stated, self-compassion is a construct influenced by Eastern traditions and Buddhist philosophy and is related to a more generalised definition of compassion. Self-compassion is a concept distinct from self-pity (Goldstein & Kornfield 1987, cited in Neff, 2003a). Unlike self-pity, self-compassion represents a balance between concern for oneself and concern for others (Neff, 2003a). To summarise, Neff's theory of self-compassion consists of three main principles: kindness to oneself rather than self-judgement and self-criticism; common humanity - seeing one's experience as part of a wider community rather than as an isolated entity; mindfulness - having an awareness of one's painful thoughts and feelings rather than over-identifying with painful thoughts and feelings. While most of the research on self-compassion has been published in social psychology journals, it can be a useful construct within the field of developmental psychology, for example, understanding how parental behaviours can contribute to the development of higher levels of self-compassion (Neff & McGehee 2010).

1.4.2 Compassionate Mind Theory

Unlike Neff's (2003a) Self-Compassion Theory, Gilbert's (2010) theory is based on an evolutionary and neurobiological concept. Gilbert's Compassionate Mind Theory is comprised of two sub-theories: the Social Mentality Theory (Gilbert, 2000; 2010) and the Three Circle Theory (Gilbert, 2010).

1.4.2.1 Social Mentality Theory

A blended concept of archetypes and evolutionary psychology, the Social Mentality Theory was developed as an approach to thinking about our minds and social behaviour (Gilbert, 2010). Gilbert (2005) explains that humans have many biosocial goals that they pursue over time. Switching between different goals involves switching motives, processes, behavioural systems, and different types of mentalisation (Liotti & Gilbert, 2011).

Social mentality refers to the way in which our minds search for other minds to interact with. It helps in terms of the awareness that a relationship is occurring, behaviours that find and engage with the relationship, and tracking what others are doing, how they relate to us, and how we relate to them. For example, when a relationship is working well, social mentalities produce positive feelings that develop and maintain the relationship but they result in negative feelings when the relationship is not going well (Gilbert, 2010). From an evolutionary perspective, social mentalities were important for survival and reproduction (Gilbert, 2015).

Gilbert (2015) argues that humans seek many different interactions. The most common among these are care-eliciting and seeking, caregiving, co-operation and group formation and competition, social ranks and hierarchies. When a social mentality is activated in an individual, that individual will search for a response from others that they deem appropriate, and the response(s) received will influence which of the social mentalities (e.g. caregiving, competition, co-operation) will be activated (Liotti & Gilbert, 2011). What is important in relation to the concept of self-compassion is that social roles and relationships can also be constructed internally as internal cues. For example, early significant relationships, such as those with caregivers, can have an impact on self-to-self relating (Irons et al., 2006). If a parent is highly critical, this may result in the internalisation of a self-critical voice. These significant

early interpersonal experiences lead to a psychological capacity to experience happiness or misery. Paul Gilbert proposes that, in order to achieve biosocial goals, these different social mentalities are switched on or off according to which of the three emotion regulation systems are activated (Gilbert, 2010).

1.4.2.2 The Three Circles Model of Emotion

The Three Circles Model focuses on three main affect regulation systems: Threat and Self-Protection; Incentive and Resource-Seeking; and Soothing and Contentment (Liotti & Gilbert, 2011). These three major types of emotion regulation systems interact with different positive or negative mentalities, but all three systems work together to balance or counterbalance each other (Gilbert, 2010).

The Threat and Self-protection system detects threat and danger and is the survival mechanism of protection that keeps us safe and free from harm. It functions by making us become aware of threats quickly, causing feelings of anxiety, anger and disgust, which then alerts the threat system to take action, such as running, fighting or freezing in a bid to protect us from the immediate danger. This threat system tends to be easily activated and can overestimate the threat or danger because it simply reacts, without taking the scale of the threat into account. This threat system is a negative affect system that is related to anger, fear and shame (Gilbert, 2010) and can be regarded as a protective mentality.

The Incentive and Resource-seeking system is a motivational drive and reward-based system that focuses on doing and achieving, as well as seeking resources in order to survive. It is a positive affect system that is driven by the evolutionary need for food, comfort, and seeking friendship (MacBeth & Gumley, 2012). This drive-excitement system is essentially an

activating system that produces feelings of excitement and pleasure so that individuals feel good and are driven to keep seeking things out in order to feel more of those feelings. It is a competitive social mentality (Gilbert, 2010).

The third system, the Soothing and Contentment system, conveys a sense of soothing and feelings of being safe and content. Although the soothing and contentment system is also a positive affect system, it differs significantly from the hyped-up incentive and resource-seeking system. The soothing and contentment system aims to restore balance and is linked to the mammalian evolution theory of the attachment system, which forms the basis of self-compassion (Gilbert, 2010).

The soothing mechanism is dependent on input from the caregiving system (Gilbert & Irons, 2005; Gilbert & Proctor, 2006). If the caregiving system consistently experiences being soothed, the individual may be able to diminish the feelings of anxiety generated by any threat, by accessing memories of being soothed in infancy (Schoore, 1994). Those who experience a secure attachment from a young age produce internal working models through which they understand others as being safe, supportive and helpful. These internal working models provide a source of self-evaluation and the ability to self-soothe (Mikulincer & Shaver, 2005).

However, children who experience an insecure attachment focus on others as a source of threat. Growing up in this type of environment leads the individual to develop an insufficient or blocked soothing system in which self-criticism rather than self-compassion emerges (Gilbert and Procter, 2006). Therefore, growing up with a secure attachment can activate the soothing effect that contributes to lessening the habitual tendency to self-criticise (Schanche, 2013). When an individual feels no threat or danger and no need to be driven to achieve something

because they feel happy with the way things are, they feel contentment. This system activates the caring social mentality, which links to affection and kindness, thereby generating self-compassion (Gilbert, 2010).

1.4.3 The Self-Compassion Theory and the Compassionate Mind Theory

Neff's (2003a) and Gilbert's (2010) theories are different, Gilbert's evolutionary concept looks at compassion from a broader perspective by considering compassion to and from others, as well as self-compassion. As the name suggests, Neff's (2003a) concept focuses mainly on self-compassion. Neff and Pommier (2013) explored the relationship between self-compassion and compassion for others. Their study concluded that there was no correlation between compassion for oneself and compassion for others in their student population group ($r=0.00$) and only a weak correlation in their group of community participants and practising meditators ($r = 0.15$ and 0.28 , respectively). What remains unclear is whether the lack of association between self-compassion and compassion for others is due to the apparent independence between the constructs or other limitations. However, drawing on Neff's self-compassion model, Pommier (2010) suggested that compassion for others can be seen as involving kindness, mindfulness and common humanity. Gilbert's (2010) construct views compassion as comprising six features: sensitivity, sympathy, empathy, motivation and caring, distress tolerance, and non-judgment. Both Gilbert's (2010) and Neff's (2003a) definitions of compassion include emotional resonance, the tolerance of uncomfortable feelings and the motivation to alleviate suffering (Strauss, 2016). In addition to these aspects of compassion, they both clearly define compassion as including the awareness of the suffering of others.

1.5 Different Perspectives of Self-Compassion

As previously stated, Neff (2011b) posits that self-compassion is not self-pity, self-indulgence or self-esteem. Self-pity is very distinct from self-compassion (Goldstein & Kornfield, 1987). Goldstein and Kornfield (1987) suggest that when individuals feel self-pity, they tend to be immersed in their problems and sufferings, and they feel very separate and disconnected from others. They may also have egocentric feelings; not only feelings of disconnection from others but a tendency to exaggerate the extent of their suffering. Bennet-Goldman (2001) claims that individuals who over-identify become completely absorbed in and carried away by their feelings and hence cannot access other aspects of their personality that are capable of alternative emotional reactions (Bennet-Goldman, 2001), which can exacerbate the feelings of separateness and isolation (Neff, 2003a). In contrast, Neff (2003a) claims that self-compassionate individuals may have a stronger connection to others and may be aware that suffering is part of the broader human experience. This allows the self-compassionate individual to relate the experience to themselves and to others without exaggerating the suffering and the sense of disconnection from others.

Self-kindness, a component of self-compassion, may be seen by some people as self-indulgence or as undeserved (Neff, 2011a); as giving an individual permission not to take responsibility for their mistakes and troubles. Neff (2011a) claims that many people feel they have to shame themselves in order to become motivated, but this often backfires when an individual finds it challenging to face the truth about themselves, and their weaknesses may therefore remain unacknowledged. However, Neff (2009) suggests that compassion provides motivation for growth and change whilst allowing an individual to feel safe so that they can better see the self without fearing condemnation.

Although self-compassion has many psychological benefits associated with self-esteem, such as self-worth, positive feelings and allowing us to realise our perceived value (Neff & Vonk, 2009), according to Neff (2003a; 2011b), self-compassion has fewer pitfalls than self-esteem. Leary et al.'s (2007) research on people's reactions to real-life events found that although self-compassion and self-esteem were inter-related, self-compassionate thoughts, feelings and behaviour differed from those associated with self-esteem. McMillan et al. (1994; cited in Neff, 2003a) claim that self-compassion is a positive emotional attitude towards oneself that also encompasses feelings of caring and kindness to others, whereas self-esteem is based on a positive or negative performance evaluation of oneself and others based on ideal standards. They also assert that high self-esteem tends to lead to narcissism and self-centredness.

Research conducted on high self-esteem suggests that when people with high self-esteem encounter negative life events, they have a tendency to engage in dysfunctional behaviours that are biased towards self-serving illusions that make them feel better (Taylor & Brown, 1988; Murray et al., 1996). These illusions involve a degree of self-deception because, not only are these individuals less likely to see themselves accurately and take personal responsibility, but they are also likely to dismiss negative feedback from others as unreliable, biased or resulting from an external cause (Leary et al., 2007). Neff and Vonk (2009) state that there is an association between individuals who want to maintain high self-esteem and ego-defensive anger. It has also been suggested that those who are defensive can become angry or aggressive if they perceive a threat to their ego (Baumeister et al., 1996; Twenge & Campbell, 2003). However, Leary et al. (2006) argue that self-compassion does not require illusions or defensiveness but rather a clear understanding of an individual's good and bad characteristics. Self-compassion is particularly important when we are not doing well (Gilbert, 2009), and we should therefore not be overly critical when we fall short of our ideal standards. However, it

should not allow these failings to go unnoticed or unrectified (Neff, 2003a): self-compassionate individuals should accept personal responsibility whilst being kind to themselves (Leary et al., 2007).

Neff (2011b) claims that when an individual is doing well, self-esteem tends to give them a sense of achievement and a tendency to engage in downward social comparisons so that they may feel superior to others and more self-confident. However, placing too much emphasis on over-evaluation can lead to a lack of concern for others, self-absorption, self-centredness and narcissism (Baumeister et al., 2000; Neff, 2015; Neff, 2003a).

However, compassion is not about an individual being superior to or more deserving than others; rather, it involves an individual recognising their equality to and connectedness with others (Brown, 1999). Neff (2011b) argues that self-compassion should soften the ego-protective boundaries between individuals, not reinforce them, while Gilbert (2009) concurs that individuals should focus on the similarities and common humanity that they share with others (Gilbert, 2009). Neff (2003a) emphasises that, unlike self-esteem, self-compassion is not based on evaluations of the self and others or ideal standards, but rather an emotionally positive self-attitude whereas self-esteem can involve feelings of opposition to others and self-judgement. Consequently, self-compassion counteracts the propensity towards narcissism and self-centredness, whereas self-esteem is significantly correlated with narcissism (Neff, 2003a; 2005).

1.6 Individual differences in self-compassion

1.6.1 Early Life Experiences with Caregivers - Parenting

As previously mentioned, self-compassion is known to be positively associated with psychological well-being (Neff, 2003a; Neff, 2003b; Neff, 2007; Neff & Vonk, 2009; Leary et al., 2007; MacBeth & Gumley, 2012; Neely et al., 2009; Zessin et al., 2015) but less is known about why some people have greater levels of self-compassion than others (Pepping et al., 2015). Some of these variations may be due to major personality traits. In an examination of self-compassion and major personality traits, Neff et al. (2007b) found that greater self-compassion was linked to lower levels of neuroticism. Self-compassion was also positively associated with agreeableness, extroversion and conscientiousness (Neff et al., 2007). However, a key factor in the development of self-compassion or lack thereof is early family experiences, which Gilbert (2005) suggests largely come from the attachment system.

Individual differences between us are important, especially if we are to learn to be empathic and curious about the minds of others. Some individuals may be more sensitive than others, and some people may find developing compassion easier than others. The source of such differences can be genetic, or it may be our life histories, and how they interact with what we have learned (Gilbert, 2010). Some researchers argue that attachment theory may provide a useful framework through which to understand the origins of compassion (Neff, 2011a; Neff & McGehee, 2010). Individual differences in the way the attachment system functions are a result of the sensitivity and responses an individual experiences from their caregivers as an infant (Mikulincer & Shaver, 2007a). As some of an individual's first experiences of seeking care and compassion occur during childhood, it is possible that the development of differences in an individual's self-compassion has its roots in early childhood experiences (Pepping et al., 2015).

Many researchers suggest that the origin of a person's self-compassion lies in their early relationship with their primary caregivers (Gilbert, 2010; Gilbert & Procter, 2006; Neff & McGehee, 2010). Neff (2003a) claims that individuals who grow up to be self-compassionate are dependent on their early upbringing, and the quality of early life attachment has a major impact on how we experience ourselves and our general well-being. Some researchers suggest that people who lack self-compassion are more likely to have critical mothers and insecure attachment patterns than those who are self-compassionate (Neff & McGehee, 2010). Emotional abuse in childhood is associated with lower levels of self-compassion in adolescence (Tanaka et al., 2011). Therefore, it is thought that family experiences may play a key role in self-compassion (Neff & McGehee, 2010). Gilbert et al. (2003) argue that personal feelings about a perceived threat in childhood and the recall of parental behaviours during early life events are crucial and often more relevant than actual parenting behaviours. The relationship between early childhood experiences and self-compassion is complex and is not the only mechanism by which parenting can affect self-compassion (Pepping et al., 2015).

It is believed that higher levels of self-criticism are related to an individual's perceptions of their parents' lack of warmth, nurturing and affection (Brewin & Furnham, 1992) as well as parental rejection (Irons et al., 2006). Growing up in such an environment leads to the individual developing an insufficient soothing system and the emergence of self-criticism rather than self-compassion (Gilbert & Procter, 2006). Conversely, growing up with a secure attachment can activate the soothing effect that contributes to lessening the habitual tendency to self-criticise (Schanche, 2013).

The theory of attachment relates to the impact that early life experiences and an individual's relationship with caregivers (mainly primary caregivers) have on the development of how an

individual relates to themselves and to others. These individual differences in relation to the attachment system are known as attachment styles. Attachment styles are either secure or insecure. Those with secure attachment styles exhibit low levels of anxiety or avoidance, and those with insecure attachment styles exhibit anxiety and avoidance patterns (Brennan et al., 1998). According to attachment theory, attachment figures provide either a safe haven or a secure base, which facilitates the development of personal qualities, such as emotional resilience (Mikulincer & Shaver, 2005). Therefore, if a child consistently experiences a safe and nurturing relationship during infancy, they are more likely to be emotionally regulated in response to a threat. They will have a greater capacity to self-soothe and, ultimately, greater self-compassion.

1.6.2 Capacity for Compassion

The capacity to increase self-compassion is important because of its association with psychological health (Barnard & Curry, 2011). Although the development of individual differences in self-compassion may be rooted in the experiences of early childhood internal working models, they can be updated throughout an individual's lifetime (Gilbert, 2005). It has been suggested that if an individual experiences a secure attachment with a romantic partner that is caring and soothing, these internal working models relating to their attachment style can be reshaped (Neff & McGehee, 2010). It can also be argued that a therapist who is empathic and soothing when a client is in distress can have a positive impact on attachment security (Liotti, 2007).

Given that mindfulness is one of the components of self-compassion, specific strategies have been developed in terms of mindfulness training that are designed to increase an individual's self-compassion. A widely used form of mindful training is mindfulness-based stress reduction

(MBSR), which teaches formal (meditation) and informal (during daily life) mindfulness meditation (Kabat-Zinn, 1982). Mindfulness-Based Cognitive Therapy (MBCT) is an adapted variant of MBSR used in clinical settings, particularly for the treatment of depression (Segal et al., 2002). MBSR and MBCT have been shown to increase self-compassion among those who participated in studies investigating its effects (Lee & Bang, 2010; Shapiro et al., 2007).

Drawing on Buddhist, social, developmental and evolutionary psychology and neuroscience (Gilbert & Proctor, 2006), Gilbert and colleagues developed compassion-focused therapy (CFT) as a general therapy approach that was designed to improve self-compassion (Gilbert, 2010). Originally developed for people with high levels of shame and self-criticism, who often lacked self-warmth and self-acceptance, CFT was informed by concepts that existed within attachment research (Gilbert, 2005; Gilbert & Proctor, 2006), in an attempt to increase the capacity for self-compassion. The techniques used were referred to as ‘compassionate mind training’ (CMT) (Gilbert, 2009; Gilbert & Irons, 2005; Gilbert & Procter, 2006). The techniques of CMT use mental imagery that can have an impact on both the physiological and neurological systems. It is believed that with repeated exposure to feelings of compassion, an individual learns to self-soothe (Shaver et al., 2007). Gilbert and Proctor (2006) found these techniques to be effective in reducing depression and anxiety and increasing self-soothing.

Neff and Germer (2012) developed a programme for use among the general public and some clinical populations. This programme, known as Mindful Self-Compassion (MSC), teaches both formal self-compassion practice (loving-kindness and affectionate breathing) and informal self-compassion practice (soothing touch, self-compassionate letter writing), and mainly focuses on the development of self-compassion and how a person relates to distress. Following a randomised control trial, Neff and Germer (2012) established that people using

these techniques experienced a significant increase in self-compassion (43%), mindfulness and compassion for others and a decrease in depression, anxiety and stress. Although there are many compassion-based programmes and therapies, some of which are mentioned above, they are not limited to one psychological diagnosis (Wilson et al., 2018). If increasing self-compassion is beneficial to both clinical and subclinical populations (Wilson et al., 2019), this raises the question of whether everyone could benefit from learning compassion-based programmes? Neff and Germer (2013) found that most self-compassion interventions are designed for those who value self-compassion but do not necessarily respond to events in a compassionate way. However, not everyone has an interest in self-compassion as a way of improving their well-being or the motivation to engage with developing self-compassion.

The results of a study by Robinson et al. (2016) on resisting self-compassion suggested that people who do not treat themselves kindly when things go wrong expect negative outcomes. They also tend to resist the idea of behaving towards themselves in a self-compassionate way, even if it would benefit them. Self-compassion intervention outcomes can be negatively affected by an individual's misguided beliefs about themselves. Consequently, additional interventions addressing these misguided beliefs should also be undertaken alongside self-compassion interventions to achieve better outcomes (Robinson, 2016). Therefore, although self-compassion interventions are of benefit to a wide range of population groups and offer a wide range of outcomes, it is worth exploring individual differences in self-compassion rooted in early childhood experiences in order to understand the origins of compassion and the likelihood that a person will be resistant to it.

1.6.3 Fears of Compassion

Empirical data has suggested that higher levels of self-compassion in an individual are related to a range of positive psychosocial outcomes (Neff, 2003b). However, some individuals may find it difficult to be self-compassionate (Gilbert & Procter, 2006). Clinical observations suggest that some individuals not only find it difficult to cultivate compassion, but that some may never experience compassion. Meanwhile, others may be fearful of compassion for themselves as well as compassion for others and from others. Individuals may even “actively resist engaging in compassionate experience or behaviours” (Gilbert et al., 2011a, p. 252), and this resistance may be due to the fact that they find compassion potentially threatening (Jazareizi et al., 2013). This perception of compassion as a threat may be because they are afraid of having to relive painful childhood experiences, which would make them more vulnerable to further pain (Gilbert & Procter, 2006). Research has been undertaken to understand more about what appears to be negative responses to compassion, and has shown that the fear of compassion is a multi-dimensional construct, including fear of receiving compassion from others (Joeng & Turner, 2015).

Receiving compassion from others is a more recent area of exploration (Jazareizi et al., 2013). Whilst some individuals can be fearful of compassion for themselves (Gilbert & Procter, 2006), others may experience a fear of receiving compassion from others. They may fear being the recipient or focus of a person’s compassion and react with fear, avoidance or other negative emotions. They may feel that they do not deserve the kindness of others or should not accept it. Fear of receiving compassion from others has been associated with insecure attachment (Gilbert, 2010).

Another form of compassion that people can fear is being compassionate to others. This may be because they fear another individual becoming too dependent on them, or they may feel distressed whilst being compassionate to others. They may also fear that they are not worthy of giving compassion to another or are not important enough to them (Gilbert et al., 2011). From an evolutionary perspective, compassion is a resource given to one's kin rather than non-kin to protect the individual's self-interest (Gilbert, 2010), otherwise it may threaten the group that the individual identifies with (Gerhardt, 2010). However, it is not always clear or certain what the motivation behind compassion for others is. Not all motivations for compassion are embedded in the caring motivation system. Some people engage in what appears to be caring behaviour but are actually motivated by other factors, such as the desire to be liked, a sense of guilt, or a religious requirement (Gilbert, 2015).

It is clear that the notion of fears of compassion, or resistance to compassion for self, from others, and for others, is complex. As this resistance to compassion could potentially hamper individuals' well-being, it is worth exploring alongside the dimensions of compassion in terms of its relationship with parenting in early childhood. It is also useful to consider what role adult attachment and social connectedness play in facilitating this relationship.

1.7 Adult Attachment

Research on adult attachment began in the mid-1980s with the social psychologists Cindy Hazen and Phillip Shaver (1987). Hazan and Shaver explored the possibility that romantic love was an attachment process. The theories of Bowlby, Ainsworth and others claim that the three major attachment styles in an infant's early life (secure, avoidant and anxious) continue through to adulthood due to the 'inner working models' (Bowlby 1969) of self that they adopt, and their social relationships. Based on the notion of the 'inner working model', Hazan and Shaver

(1987) found that the biosocial process by which adult lovers experience romantic love was similar to those bonds of affection experienced in early years between infants and their parents.

Gillath et al. (2016, p. 215) found that securely attached individuals tended to report their romantic relationships as satisfying, and value intimacy and closeness. Conversely, Mikulincer and Shaver (2016, p. 17) suggest that insecure people describe specific friends and romantic partners negatively. They also tend to hold more negative views about humanity as a whole. They reviewed several studies, and found that, overall, attachment insecurities interfere with optimal caregiving to an individual's partner in adult romantic relationships. They also found that attachment-anxious individuals have an anxious self-focus, accompanied by confusion and a wish for their partner to adopt the 'stronger and wiser' role, while attachment-avoidant individuals' defensiveness with a partner who is in need of sensitive and responsive caregiving interferes with optimal care for the partner (Mikulincer & Shaver, 2016, p. 366).

Research has shown that those with secure attachment in their early years are likely to have a secure attachment style with their romantic relationships (Hazan & Shaver, 1987). If this is the case, those with secure relationships throughout their lifespan are more than likely to have the ability to foster compassion for themselves, receive compassion and give compassion to others. Conversely, they are less likely to have a fear of compassion for self, and of giving it to and receiving it from others. Therefore, it is worth exploring the relationship between parenting and compassion and trying to establish what role adult attachment (romantic relationships) may play in this relationship.

1.8 Social Connectedness

According to Lee and Robbins (1995; 1998), social connectedness is an attribute of the self that reflects an individual's awareness of interpersonal closeness with the social world as a whole. This sense of closeness is an important component of an individual's sense of belonging. It is grounded in the experiences of proximal and distal relationships, such as those with parents, friends, peers, communities and wider society (Lee & Robbins, 2000). One of the most influential social relationships is the child's interactions with their parents (Lee et al., 2001). Bowlby's attachment theory highlights the importance of social connectedness throughout all the stages of life, both during the early years and later in life (Hameed et al., 2023). Adult attachment can be seen as more of an individual relationship in the present, whereas social connectedness entails a long-term interpersonal sense of belonging within society (Lee et al., 2001).

Similarly to self-compassion, previous research suggests that social connectedness plays a positive and protective role in an individual's mental health (Kawachi & Berkman, 2001; McLoughlin et al., 2019) and well-being (Arslan, 2018; Griffiths et al., 2007; Lee & Robbins, 1998). By exploring the constructs of social support and social connectedness in older adults, Ashida and Heaney (2008) hypothesised that social connectedness influences well-being. They found that perceived social connectedness was positively associated with health status, whereas social support was not. They concluded that perceived social connectedness might be more important to health and well-being in older adults. Social connectedness could be considered a community-level protective factor. If these protective factors facilitate well-being, they may also have a mediating role to play in coping with adversity (Lee et al., 2008; Yoon & Lee, 2010).

According to Ashida and Heaney (2008), individuals may feel socially disconnected despite having plenty of support providers. If this is the case, then it may be that social connectedness includes feelings of belonging that are greater than an individual actively engaging in social relationships (Lee & Robbins, 1995). In a review of the literature on connectedness, Townsend and McWhirter (2005) concluded that social connectedness was multi-dimensional, comprising of attachment, bonding, companionship and belongingness. Conversely, Baumeister and Leary (1995) suggest that social connectedness is a construct that should be differentiated from belongingness. They defined it as being part of a group with two main components: the bond an individual experiences with others; and the degree to which an individual feels socially supported and satisfied. There is an inherent need for individuals to feel connected to social groups in a broader sense and to form significant interpersonal relationships that offer meaningful experiences.

1.9 Conclusion

This chapter has explored the theoretical concept of self-compassion and the current literature on this subject. It has established the importance of self-compassion as a concept and its influence on psychological well-being. The two main theoretical concepts of self-compassion that form the main themes in the following chapters, Neff's (2003a) Self-compassion Theory, and Gilbert's (2010) Compassionate Mind Theory, have been discussed. Exploring individual differences in self-compassion can enhance the understanding of the possible origins of self-compassion and the reasons why individual levels of self-compassion vary, offer insights into how individuals may be inhibited by a fear of compassion and show how we may increase our capacity for self-compassion.

If early childhood experiences affect our self-to-self relating and, therefore, our capacity for greater compassion, it is helpful to consider whether there are other dimensions that affect this relationship. Bowlby and Ainsworth believe that attachment-related experiences have social and behavioural functions that spanned a person's life from 'cradle to grave' (Bowlby, 1988; p. 92). Rothbard and Shaver (1994) claim that attachment styles are difficult to change, while Fraley (2002) thought that attachment styles remained stable over time and that attachment is mediated by personal relationships throughout a person's life.

Research suggests that the concepts of adult attachment and social connectedness are rooted in early childhood experiences and, therefore, are probably associated with an individual's perceptions of parenting in childhood. A person's capacity for self-compassion is also influenced by their perceptions of parenting in childhood. Extensive research has been conducted on the relationship between parenting during childhood and self-compassion. The general consensus is that individuals who perceive their parenting positively are likely to have greater self-compassion. Therefore, it may be advantageous to explore these relationships in more detail in order to understand more about what roles adult attachment and social connectedness play in this relationship.

Having explored the main themes of the thesis in this chapter, Chapter Two reviews the current literature on these topics. A systematic literature review is conducted, not only to review the current literature and identify gaps within it, but also to set out the aims and research questions to be addressed throughout the thesis.

Chapter Two

Literature Review

2.1 Introduction

The relationship between early childhood experiences and self-compassion is likely to be a complex and indirect mechanism by which parenting can affect self-compassion (Pepping et al., 2015). Individuals can find it difficult to be self-compassionate (Gilbert & Proctor, 2006), as some having a fear of self-compassion or a blocked capacity for self-compassion. Remarkably, little is known concerning the origins of self-compassion. To date, only one study (Pepping et al., 2015) has investigated early childhood experiences and adult attachment as potential origins of individual differences in terms of self-compassion, and they found that these factors only accounted for approximately 15% of the variance in self-compassion. No research to date has investigated what other factors may contribute to the potential origins of individual differences in self-compassion, such as social connectedness. This indicates that there may be a gap in the literature, which this thesis aims to begin addressing.

2.1.1 Chapter Overview

In this chapter, relevant literature is reviewed in order to explore the relationship between self-compassion and perceived parenting in childhood and adult attachment. A search is conducted of the current literature, linking the relationship between retrospective perceptions of parenting in childhood, self-compassion, fear of compassion, adult attachment and social connectedness. This systematic literature review is designed to help identify current research into what might mediate the relationship between perceived parenting and compassion and what could account for the variance in compassion. An explanation of the search strategy method and how it was used to identify the relevant literature (Self-Compassion, Parenting and Attachment) for this

thesis is provided. The chapter then evaluates the relevant literature from the search results, and ends with a discussion of the methodological limitations, the rationale, and the aims of the proposed first study.

2.1.2 Relationship between parenting, attachment and self-compassion

As previously stated in the Introduction, several researchers suggest that the origin of a person's self-compassion is rooted in their early relationship with their primary caregivers (Gilbert, 2010; Gilbert & Procter, 2006; Neff & McGehee, 2010). Early attachment experiences influence attachment behaviour and continue to do so throughout the life cycle (Neff, 2003a). Identifying which aspects might influence the relationship after childhood may go some way towards identifying contributory factors.

2.2 Method

2.2.1 Search Strategies

The literature search was conducted on 30th August 2023 to identify relevant papers for this review. The first stage involved identifying relevant papers using a computer-assisted literature search. A literature search was conducted using the database EBSCOHost (including CINAHL, PsycINFO, PsycARTICLES MEDLINE, E-Journals). Web of Science Core Edition, ProQuest and EThOS were also searched for doctoral theses and dissertations on the same topics. These databases were used because they are most likely to cover the relevant literature. Self-compassion began as a Buddhist concept that was not well known in Western psychological circles until Neff (2003a) attempted to define self-compassion and its relationship to other aspects of psychological function in 2003. Consequently, there is little, if any, Western psychological literature on self-compassion that pre-dates this period. The search period was restricted to the period from January 2003 to August 2023. Although the topics of attachment

and parenting, fears of compassion, and social connectedness pre-date this time, the search criteria needed to include a link to self-compassion to be relevant for this review. Therefore, all the subjects were also searched from January 2003. Five search components were used for searching the electronic databases:

1. Component 1 (C1): Compassion* OR Self-Compassion* OR Self Compassion*
2. Component 2 (C2): Parenting OR Parental OR Parenting behavior* OR caregiving
OR Parenting style
3. Component 3 (C3): Attachment OR Attachment Style OR Adult Attachment
OR Adult Attachment Style
4. Component 4 (C4): Fear* of Compassion OR Compassion Fear*
5. Component 5 (C5): Social Connectedness OR Social Connection OR Social Integration
OR Social Network

The databases were searched using four limiters, key terms, and synonyms. The four limiters were that the papers had to be peer-reviewed, and written in the English language after the year 2003, with duplicate papers removed.

2.2.2 Search Criteria

When searching the titles and abstracts for articles that included all five components relevant to the study (self-compassion or fears of compassion, parenting style, adult attachment, social connectedness), the results proved to be too narrow, as no papers were identified. Neither were any papers identified when a search was run for 'compassion' and four of the three remaining components. When searching for papers that included three components relevant to the study (self-compassion or fears of compassion, parenting style and adult attachment), the results

returned were still too narrow. For example, EBSCOhost, one of the largest databases for this topic, returned only 85 likely results.

As the search was deemed too narrow, it subsequently needed to be broadened in order to find more potentially relevant papers (see Table 2.1). Therefore, the search terms were extended to include papers containing ‘compassion’ or ‘fear of compassion’ and one other component: parenting style, adult attachment, and social connectedness, in the hope that more relevant articles would be found in the database. However, EthOS was searched using the more generic part of each component, limited to ‘compassion’ and one of the following components (Compassion* OR Fear* of Compassion AND Parent* OR Attachment OR Social); this resulted in a return of 246 papers. All the doctoral theses identified happened to be dated from the period 2007 to 2023.

2.2.3 Selection of Articles

All the articles that were returned by the search were reviewed using the following inclusion and exclusion criteria:

Inclusion criteria:

- Peer-reviewed articles
- Doctoral theses and dissertations.
- Dated between January 2003 and August 2023.
- Adult human population groups.
- Articles that reported quantitative findings.
- Articles that used a ‘compassion’ or ‘fears of compassion’ measure.

Exclusion criteria:

- Articles that were not peer-reviewed publications, e.g. book chapters.
- Articles that were published before 2003.

- Articles that were written in a language other than English.
- Articles that did not include an adult human population (18 years and over).
- Articles that did not use a clear, quantifiable measure of compassion.
- Articles that focused on current parenting-child relationships.
- Articles in which ‘compassion’ was an independent variable.

Table 2.1. *Search Results for Compassion, Fears of Compassion, Parenting or Attachment and Social Connectedness*

Search Terms	Limiters	Results
(Compassion* OR Self-Compassion* OR Self Compassion* AND Parenting OR Parental OR Parenting behavio*r OR Parenting style OR caregiving) OR (Compassion* OR Self-Compassion* OR Self Compassion* AND Attachment OR Attachment Style OR Adult Attachment OR Adult Attachment Style) OR (Compassion* OR Self-Compassion* OR Self Compassion* AND Social Connectedness OR Social Connection OR Social Integration OR Social Network) OR Fear* of Compassion OR Compassion Fear*	Language: English Years: 2003 - 2023 Peer Reviewed Duplicates Removed Title and Abstract Search	CINAHL Ultimate (N=619) MEDLINE (N=880) PsycARTICLES (N=64) PsycINFO (N= 1,115) Web of Science (N=325) ProQuest Dissertations & Theses (N=542)
(Compassion* AND Parent* OR Attachment OR Social*) AND (Fear* AND Parent* OR Attachment OR Social*)	Language: English Years: 2003 - 2023 Duplicates Removed Title & Abstract Search Doctoral Dissertations	ETHoS (N=246)

2.3 Search Results

2.3.1 *Identification of papers*

In the first stage of the search, a total of 3,791 results were returned from the online databases, with 1,040 duplicates removed from the results, as illustrated in Figure 2.1. In the second stage of the search, a manual search was conducted independently from the electronic search. Reference lists of the relevant studies and known authors in the field were searched, which resulted in six additional papers being identified, and one further paper was found by searching Google Scholar® (Satici et al., 2015). Seven papers were added after the manual search of papers, resulting in a total number of 2,758 papers.

2.3.2 *Screening of Papers*

Titles and abstracts were reviewed using the inclusion and exclusion criteria, which left a total of 72 papers. In the case of papers with titles and abstracts that meant it was unclear whether they met the inclusion and exclusion criteria, the full text was obtained and reviewed. 25 articles remained after this step. Two reviews were excluded, but the references were reviewed for relevant additional papers. Following this process, out of the 72 articles, 47 were then excluded (e.g. non-adult sample, no compassion measure). Due to the plethora of studies on the relationship between self-compassion and adult attachment, only papers that measured adult attachment using a variation of The Experiences in Close Relationships Scale (ECR; Brennan, Clark & Shaver, 1998) were included, as well as those in which only self-compassion and adult attachment were measured. Ultimately, 25 papers remained, comprising 24 published studies and 1 thesis.

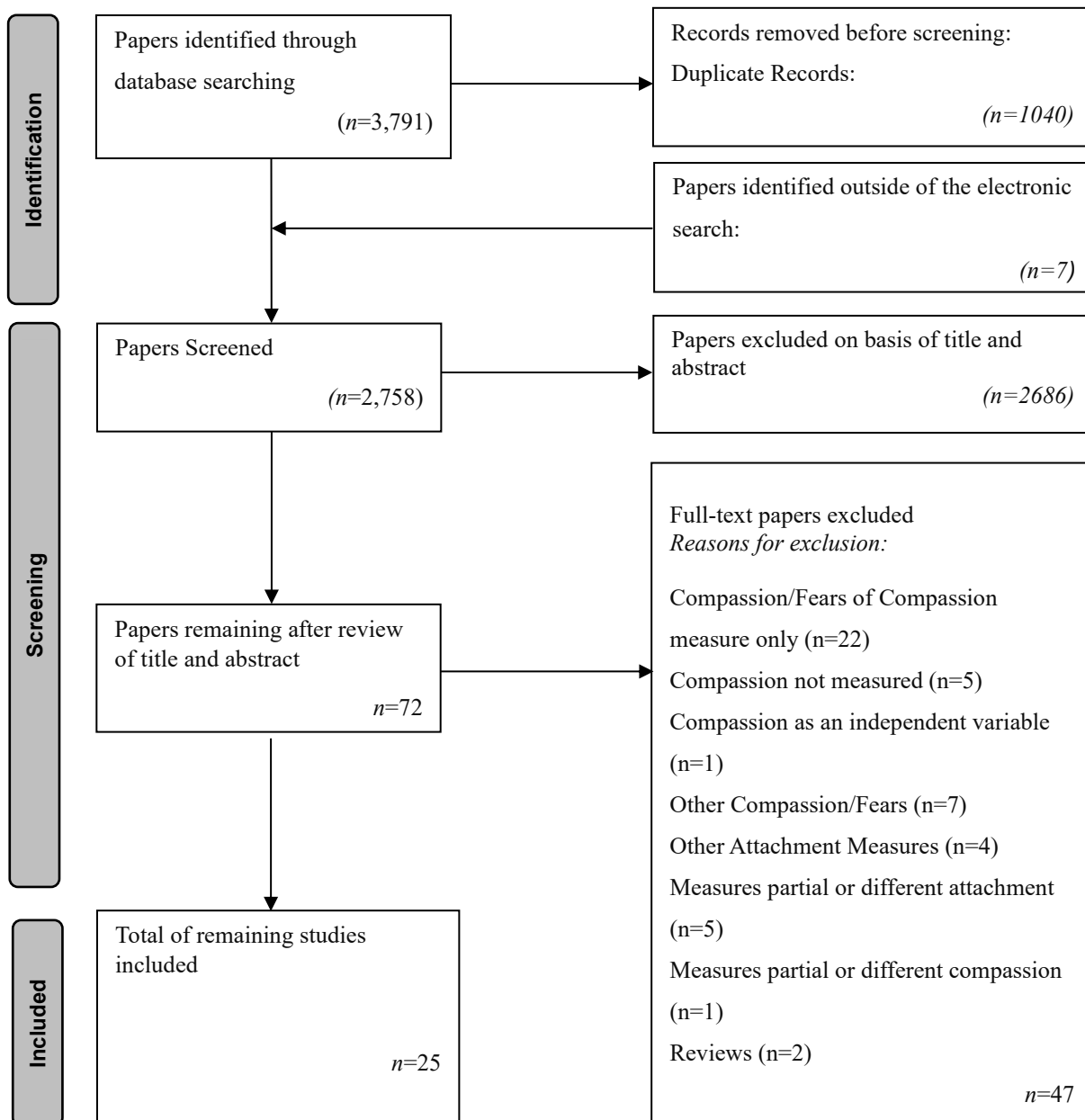


Figure 2.1. Flow diagram illustrating the paper selection and exclusion process. Adapted from “The PRISMA 2020 statement: an updated guideline for reporting systematic reviews” by Page et al. (2021).

2.3.3 Included Papers

Due to no articles including all the measures for parenting, compassion or fears of compassion and adult attachment and social connectedness being identified, the search results identified articles that investigated at least two components of the criteria. Table 2.2 shows the breakdown of papers per grouped component.

Table 2.2 Search results for the components included in each paper

Search Components	Articles
Self-Compassion + Parenting	5
Self-Compassion + Attachment	14
Self-Compassion + Social Connectedness	1
Self-Compassion + Parenting + Attachment	2
Self-Compassion + Attachment + Social Connectedness	1
Parenting + Fears of Compassion	1
Social Connectedness + Fears of Compassion	1

2.4 Results

2.4.1 Literature Results

The relationship between memories of parenting and adult attachment is well-known and has been extensively researched. However, the relationship between parenting and adult attachment, with compassion or fears of compassion, has not been as widely researched, and nor has the relationship with social connectedness. Therefore, it was important for the sake of clarity that only those papers that included ‘compassion’ or ‘fears of compassion’ with either or both of these relationships were searched. The 25 papers identified in the literature search mainly focused on self-compassion, while one addressed fears of compassion. Of those, nine papers explored the relationship between self-compassion and parenting received in childhood and one paper explored the relationship between fears of compassion and parenting received in childhood. Eighteen papers explored the relationship between adult attachment and self-compassion, while only one study explored the relationship between adult attachment and fears of compassion. Only three studies explored the relationship between self-compassion or fears of compassion and parenting and attachment. Although one paper (Moreira et al., 2016) investigated parenting, self-compassion and attachment, it focused specifically on mindful

parenting, and not perceived parenting in childhood. The topic of social connectedness, however, was found in four studies. The 25 papers that remained in the literature review are summarised in Appendix AA.

2.5 The Self-Compassion Scale (SCS)

Of the 24 studies, 23 measured self-compassion using the Self-Compassion Scale (SCS) (Neff, 2003b), with 16 of those studies using the 26-item version and 8 using the 12-item short form of the SCS (Raes et al., 2011). Three of the studies used adapted versions of the SCS: Moreira et al. (2015) used the Portuguese 26-item version (Castilho & Pinto-Gouveia, 2011); Satici and Akin (2015) used the Turkish version (Akin et al., 2007); and Joeng et al. (2017) employed the Korean version (Kim et al., 2004).

In 2003, in order to measure her concept of self-compassion, Neff (2003b) developed the Self-Compassion Scale (SCS) that originally measured three subcomponents of self-compassion, but after confirmatory analysis, six subscales were identified (self-kindness, self-judgement, common humanity, isolation, mindfulness and over-identification). These subscales were all components of the single factor termed 'self-compassion' (Neff, 2003b). The SCS measures self-compassion in the form of a self-report questionnaire. To date, most researchers have examined the overall construct of self-compassion and reported this as a total self-compassion score (Neff & Whitaker, 2016). Therefore, in the literature on self-compassion that was reviewed for this study, use of the SCS to assess self-compassion was prevalent. Although this is useful when comparing the results of previous papers to the current study's results, it does not allow for other self-compassion measures to be compared.

2.5.1 Memories of parenting and self-compassion

Of the five papers relating to the relationship between early childhood memories of parenting and self-compassion, only one paper (Kelly & Dupaquier, 2016) used the *Egna Minnen Beträffande Uppfostran*: Memories of Upbringing (EMBU) short form (s-EMBU; Arrindell et al., 2001). The s-EMBU is a 23-item adapted version of the original Swedish 81-item EMBU (Perris, Jacobsson, Lindstrom, von Knorring & Perris, 1980), which none of the papers used.

The remaining five papers all used different measures of parenting, namely: Measure of Parenting Style (MOPS) (Parker et al., 1997); Socialisation of Emotion Scale – revised (SES) (Sauer & Bauer, 2010); the Early Life Experiences Scale (ELES) (Gilbert et al., 2003); the Turkish version (Satici et al. 2015) of the ELES; and the Frost Multidimensional Perfectionism Scale (FMPS) (Frost et al., 1990). All the papers used parenting as a predictor variable in their studies, with two studies using self-compassion as a mediating measure (Potter et al., 2014; Westphal et al., 2016;).

Farnsworth et al. (2016) explored the effect of caregiving behaviour on self-compassion (including fear of emotion and spirituality). Caregiving behaviour was measured using the Socialisation of Emotion Scale – revised (SES) (Sauer & Bauer, 2010). The SES is a scale that measures perceived childhood emotional validation and invalidation retrospectively. Undergraduate participants (n=192) were asked to identify two primary caregivers so that Farnsworth et al. (2016) could further explore whether the gender of a caregiver could help explain any of their study's findings. The study found that different caregiver interactions influence the level of self-compassion in an individual, and there was a gendered element to it. The findings suggest that, for female participants, a parent's gender influences the way in which validation/invalidation has an influence on the development of self-compassion, but

male participants may have more resilience to invalidation from a caregiver. They showed that there was a significant relationship between caregiver validation and self-compassion ($\beta = .07$, $p < .05$), but there was a small non-significant direct effect from caregiver invalidation to self-compassion ($\beta = -.01$, $p = .01$). However, the beta coefficient for caregiver validation and invalidation was very small; the large sample size, comprising 912 participants, could explain why such a small coefficient was found to be significant.

Farnsworth et al. (2016) found parental caregiving behaviours to have less of an influence than an individual's fear of emotions on self-compassion. The stronger association between self-compassion and fear of emotion suggests that emotion regulation skills may play an essential role in developing self-compassion. Poor emotional regulation that contributes to an individual developing less self-compassion could be due to a negative attitude towards emotions. The relationship between parental caregiving behaviours, such as (in)validation and self-compassion, may be explained by the indirect relationship that exists via fear of emotions.

Westphal et al. (2016) investigated whether self-compassion and emotional invalidation could explain the relationship between exposure to adverse parenting during childhood and adult psychopathology in 326 adult psychotherapy patients. Instead of using the Socialisation of Emotion Scale (Sauer & Bauer, 2010), they used the Measure of Parenting Style (MOPS; Parker et al., 1997) scale. This measures the parenting styles of indifference, over-control and abuse, but only the indifference and abuse subscales were used for this study. The results supported the study's hypothesis that the relationship between exposure to negative parenting during childhood and adult mental health problems was partly mediated by self-compassion and perceived emotional invalidation. An inverse relationship between self-compassion and psychopathology was consistent with the findings from previous literature regarding the

relationship between self-compassion and depression and anxiety (MacBeth & Gumley, 2012). To measure emotional invalidation, they used the Leahy Emotional Schema Scale (LESS; Leahy, 2002). Emotional invalidation and self-compassion correlated negatively ($\beta = -0.46$, $p < 0.001$). These results were differed markedly from those of Farnsworth et al. (2016). Westphal et al.'s (2016) results may be due to the fact that their participants comprised a clinical sample, and because self-compassion may demonstrate an internalised interpersonal experience (from the past), and current levels of intra-psychological variables, such as self-esteem, in individuals with acute symptoms of psychopathology (especially depression) who may have less resilience, may differ from those of the average person.

Kelly and Dupasquier (2016) explored the relationship between parental warmth and self-compassion, with social safeness as a mediator. They used the Eгна Minnen Beträffande Uppfostran ["My memories of upbringing"] short version (s-EMBU) (Arrindell et al., 2001) for measuring the memories of parental rearing behaviour, which assesses three types of parenting style: parental emotional warmth; rejection; and overprotection. The main objective of Kelly and Dupasquier's (2016) study of 153 undergraduate students in a Canadian university was to test the theory that a higher recall of parental warmth would be associated with a greater capacity for self-compassion and receiving compassion, which was assessed indirectly via high levels of social safeness. The study's hypothesis was supported, whereby recollections of parental warmth related to an individual's capacity for self-compassion and receiving compassion. These findings may also suggest that self-compassion has a protective element.

Satici et al. (2015) examined the relationship between early life experiences and self-compassion. Using the Turkish version (Satici et al. 2015) of the Early Life Experiences Scale (ELES) which Gilbert et al. (2003) designed to measure an individual's memories of family

life, which required them to recall the feelings of being devalued and frightened, and subordinate behaviour. Satici et al. (2015) found that early life experiences had a direct impact on self-compassion. Positive life experiences increased self-kindness, common humanity and mindfulness and decreased self-judgement, isolation and over-identification.

The final study among those papers investigating parenting and self-compassion was conducted by Potter et al. (2014), which examined the possibility that different components of self-compassion (self-warmth and self-coldness) mediated the relationship between social anxiety and parental criticism. Using the Frost Multidimensional Perfectionism Scale (FMPS) which contains a four-item parental criticism subscale that reflects critical evaluation by parents (Frost et al., 1990), Potter et al. (2014) found social anxiety to be related to parental criticism (Neff & McGehee, 2010; Wei et al., 2011). Additionally, self-compassion was found to be a significant mediator of the relationship between parental criticism and social anxiety. At the time of publication, Potter et al.'s (2014) study was the first to demonstrate a relationship between maladaptive developmental experiences and low levels of self-compassion using two separate dimensions of self-compassion (self-warmth and self-coldness), rather than treating self-compassion as a single concept. The results showed that parental criticism positively correlated with social anxiety and self-coldness but negatively correlated with self-warmth. Supplementary analysis using a measure of total self-compassion also found that self-compassion mediated the relationship between parental criticism and social anxiety. Compared to the other papers, the mean age of Potter et al.'s (2014) community sample was significantly older (30.23 years), as was the case with Westphal et al.'s (2016) clinical sample, which had a mean age of 34.05 years. This was probably due to the fact that the other three studies recruited undergraduate participants.

2.5.2 Conclusion: The relationship between parenting and self-compassion

Studies that assessed negative parenting experiences reported a statistically significant negative relationship with self-compassion, whereas those that examined positive experiences of parenting reported positive relationships with self-compassion. Both Westphal et al. (2016) and Potter et al. (2014) used self-compassion as a mediator in their studies rather than an outcome measure. Thus, it would be useful to find out whether the relationship between parenting and self-compassion still holds in a community sample when self-compassion is not a mediator variable but an outcome variable.

Of the five studies that examined self-compassion and parenting, only three used early childhood memories of parenting as the independent variable and self-compassion as the dependent variable (Kelly & Dupasquier, 2016; Satici et al., 2015; Farnworth et al., 2016). The study by Kelly and Dupasquier (2016), was the only one to measure early childhood memories using the s-EMBU measure, resulting in various concepts being measured in different ways.

2.5.3 Attachment and self-compassion

Two of the fifteen papers used the 36-item original Experiences in Close Relationship Scale (ECR; Brennan, Clark & Shaver, 1998; Homan, 2016; Wei et al., 2011) to measure attachment. Additionally, Homan (2016) adapted the wording to refer to relationships in general rather than just romantic relationships. The 12-item version of The Experiences in Close Relationship Short Form Scale (ECR-S; Wei et al., 2007) was used in three studies (Beduna et al., 2019; Bolt et al., 2019; Carbonneau et al., 2021). Bugay-Sökmez et al. (2021) used the ECR short version, comprised of 5 items for each subscale, which was adapted and translated into Turkish (Sümer, 2006). A 9-item Experiences in Close Relationship Structure Scale (ECR-SS; Fraley et al. 2011) was used in one study (Raque-Bogdan et al., 2016). Moreira et al. (2016) assessed

only maternal attachment using the Portuguese version (Moreira et al., 2015) of the ECR-RS (Fraley et al. 2011). Finally, the 36-item Experiences in Close Relationships-Revised version (ECR-R; Fraley et al., 2000) was employed in another five studies (Arambasic et al., 2019; Haag, 2019; Mackintosh, 2017; Murray et al., 2021; Øverup et al., 2017) with a Korean version (Kim 2004) of the measure featuring in one paper (Joeung et al., 2017). One paper included in the literature review measured attachment using The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991); it was included due to the fact that it also made use of the Social Connectedness Scale (Lee & Robbins, 1995).

Of the fifteen studies that analysed adult attachment and self-compassion, five investigated the effects of attachment on depression or anxiety when self-compassion mediated the relationship. Øverup et al. (2017) conducted an exploratory study that aimed to examine potential mediators (self-compassion, belonging, burdensomeness) of the association between attachment and depression using the ECR-R (Fraley et al., 2000) and SCS-SF (Rae et al., 2011) scales. Self-compassion was found to be negatively related to attachment anxiety and avoidance. It was also discovered that self-compassion, perceived belonging and burdensomeness mediated the association between attachment anxiety and avoidance. Those with higher attachment anxiety reported lower levels of self-compassion, belonging and burdensomeness and, in turn, more depressive symptoms. They also found that attachment avoidance was unrelated to depressive symptoms. Øverup et al. (2017) suggest that those with greater attachment avoidance had a negative model of others rather than a negative belief in themselves.

Joeung et al. (2017) used the 26-item SCS (Neff, 2003b) and the ECR-S Korean version (Kim, 2004) in their study, which investigated a sample consisting of 473 Korean students (Mean age=25.3 years) to explore how self-compassion and fear of compassion mediate the

relationship between attachment (anxiety and avoidance) and emotional distress (anxiety and depression). A structural equation model indicated that the self-compassion mediatory effect, and the fear of compassion and self-compassion serial effect, were significant for all paths between attachment anxiety and avoidance; and depression and anxiety. When self-compassion was the only mediator, attachment anxiety and attachment avoidance were associated with less self-compassion and greater anxiety and depression. In the latter case, this relationship was found to be partially mediated by self-compassion

The path from anxious and avoidant attachment to anxiety was shown to be fully mediated by self-compassion in the case of anxiety attachment, and partially mediated in the case of avoidant attachment. As suggested by Joeng et al. (2017), this may indicate that SC and FSC operate differently depending on whether those who experience anxiety are attachment anxious or attachment avoidant (Mikulincer & Shaver, 2007). This may be due to the fact that individuals with anxiety attachment are unable to cope with anxiety due to a lack of self-soothing (Pepping et al., 2015), but increasing self-compassion and reducing fear of compassion could offer a means of reducing their anxiety. By contrast, those who are attachment avoidant may deny their need for compassion when they feel vulnerable in anxiety-inducing situations (Pepping et al., 2015). To manage anxiety, they would need to acknowledge their feelings of vulnerability and their need for compassion, thereby reducing their fear of compassion and being willing to accept self-compassionate behaviour.

Similar results were found by Haag (2019) who analysed the relationship between attachment anxiety and anaclitic and introjective depression, mediated by self-compassion. The results reflected Joeng's (2017) findings in relation to avoidance, namely that self-compassion partially mediated the relationship between attachment avoidance and depression; however,

while Joeung et al. (2017) found that self-compassion had a full mediation effect on the relationship between attachment anxiety and depression, Haag (2019) found this relationship to be partially mediated by self-compassion.

Mackintosh et al. (2018), Arambasic et al. (2019) and Murray et al. (2021) all used the 36-item SCS (Neff, 2003b) and ECR-R (Fraley et al., 2000) in their studies on self-compassion. They all investigated the effect of self-compassion as a mediator between attachment and their dependent variable. Mackintosh et al. (2018) examined the role of self-compassion and its relationship with attachment and interpersonal problems in a clinical population suffering from anxiety and depression. Attachment anxiety and attachment avoidance negatively correlated with self-compassion, but there was no significant correlation between attachment and depressive symptoms. Self-compassion was found to mediate the relationship between attachment avoidance and emotional distress and anxiety, indicating that low self-compassion and a high prevalence of interpersonal problems were predicted by attachment avoidance (not attachment anxiety). However, when self-compassion and interpersonal problems were removed from the model, attachment avoidance explained 11% of the variance in anxiety. Wei et al. (2011) proposed that the relationship between self-compassion and attachment avoidance is not as straightforward as that between self-compassion and attachment anxiety.

In Arambasic et al.'s (2019) study, attachment anxiety and avoidance were also shown to have negative correlations with self-compassion ($\beta = -.62$, $P < .05$; $\beta = -.63$, $< .05$, respectively) in 82 Australian women affected by breast cancer. The correlational analysis revealed that higher attachment anxiety and avoidance were significantly and positively associated with stress and the perceived impact of cancer. Most of the participants were generally securely attached, but less secure with regard to the attachment avoidance dimension. The findings suggest that

attachment styles are relevant to long-term breast cancer survivors' psychological adjustment and that both attachment anxiety and attachment avoidance were indirectly associated with psychological adjustment via self-compassion.

Murray et al. (2021) hypothesised that thought suppression and self-compassion serially mediated the relationship between attachment avoidance and depression. The results showed that higher attachment avoidance predicted higher thought suppression, while higher thought suppression predicted lower levels of self-compassion and, in turn, higher levels of depression. When attachment anxiety was added to the model as a covariate, the effect was no longer significant. Another model was constructed in which attachment avoidance was replaced by attachment anxiety as the independent variable, and it was found that this relationship remained significant with or without the addition of attachment avoidance. Murray et al. (2021) concluded that self-compassion, along with thought suppression, are underlying mechanisms in the relationship between insecure attachment and depression, and that these factors operate in opposing directions.

The association between adult attachment and relationship quality as a strong negative predictor of an individual's mental and physical health was explored by Bolt et al. (2019). This relationship was demonstrated to be mediated by self-compassion and compassion for one's partner. The results showed that high levels of attachment anxiety and attachment avoidance were associated with lower relationship quality. The results also found that a compassionate attitude towards oneself was not statistically a mediator between attachment avoidance and relationship quality, and this shows that the relationship between attachment avoidance and self-compassion is not as strong a relationship as that between attachment anxiety and self-compassion (Wei et al., 2011).

Raque-Bogdan et al. (2016) conducted a study about romantic anxiety and peer attachment anxiety. They hypothesised that maternal attachment anxiety (attachment anxiety to one's mother or maternal relationships) was related to romantic attachment anxiety and peer attachment anxiety, mediated by self-compassion and body appreciation. They also hypothesised that self-compassion mediates the relationship between attachment and general well-being (Neff & McGehee, 2010; Wei et al., 2011) and, therefore, is a relevant construct for body image because the higher the level of self-compassion, the fewer concerns a person has about their body. The 9-item ECR-RS (Experiences in Close Relationships- Relationships Structure Questionnaire (Fraley et al., 2011) was used to measure attachment in first-year college women in the United States. Raque-Bogdan et al.'s (2016) hypothesis on maternal attachment anxiety and self-compassion was supported, in that the relationship between maternal attachment anxiety and self-compassion was found to be mediated by peer and romantic attachment anxiety. It was also shown that self-compassion significantly mediated the relationship between peer attachment anxiety and body appreciation.

Wei et al. (2011), Homan (2016) and Neff and McGehee (2010) all studied well-being with self-compassion as a mediator in different age groups. Neff and McGehee (2010) explored the relationship between attachment style and self-compassion using a sample of 235 adolescents and young adults. The authors used The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) to measure four styles of attachment, and the SCS (Neff, 2003b) to measure self-compassion. In addition, Neff & McGehee (2010) conducted a correlational study investigating whether previous findings related to the association between self-compassion and well-being in adults (Neff, 2003a) would be replicated among adolescents. They also predicted that self-compassionate adolescents would report experiencing greater social connectedness and less anxiety and depression. Their study found that adolescents and young adults with

secure attachment were more self-compassionate. They also found that self-compassion was associated with well-being among adolescents and this was consistent with the findings regarding young adults as well. The study indicated that attachment and the adolescents' relationships with their parents were associated with self-compassion. Although the finding regarding the relationship between secure attachment with their parents and self-compassion in adolescents is interesting because it shows that it may be applicable to those who have not reached adulthood, too, the main focus of the study was on slightly older young people who would be classified as having reached adulthood.

There was found to be a negative association between preoccupied and fearful-avoidant attachment styles and self-compassion, yet the dismissive-avoidant attachment style was not significantly associated with self-compassion. Neff and McGehee (2010) concluded that parents who are warm, caring and supportive can positively influence the way a child relates to themselves. Those individuals with higher self-compassion also reported experiencing less depression and anxiety as well as feelings of greater connectedness in their relationships. The Self-Compassion Scale showed a positive correlation with social connectedness with others.

Wei et al. (2011) conducted a study that hypothesised that self-compassion is a significant mediator between attachment anxiety and well-being. Using two samples - a college sample of 194 students and a community sample of 214 adults - the authors used the ECR to assess attachment. This enabled them to cross-validate college students with community adults. For both samples, Wei et al. (2011) found that self-compassion significantly mediated attachment anxiety and subjective well-being. Those with higher levels of attachment anxiety are most likely to be self-critical because they are more likely to have a negative representation of self and become overwhelmed by their own distress, leading to decreased subjective well-being.

The findings were noteworthy in that all the structural paths in the college sample were significant with the exception of that from attachment avoidance to self-compassion ($\beta = -.07$, $p > .05$), but in the case of the adults in the community sample, the path between attachment avoidance and self-compassion was significant ($\beta = -.27$, $p < .001$). The results obtained from the college and community samples differed from those of Neff and McGehee (2010) (which are explored in section 2.4.6). This association was not found to be significant but was positive in its direction. In contrast, both of Wei et al.'s (2011) results were negative in direction. These differences could be due to participants with high levels of attachment avoidance being more self-reliant. It could also be the case that with high attachment avoidance feel they do not need the help of others as a way of avoiding rejection, as previously suggested in the discussion of Joeng et al.'s (2017) findings.

Homan (2016) conducted the first study to test the association between attachment style and eudaimonic well-being in older adults, mediated by self-compassion. The study hypothesised that both attachment anxiety and attachment avoidance would have an inverse relationship with all 6 of the dimensions of eudaimonic well-being later in life when mediated via self-compassion. Using the Experiences of Close Relationships (ECR, Brennan et al. 1998) scale to measure attachment in 126 older adults aged 60 or above (mean age = 70.40 years), the results showed that self-compassion mediated the associations between attachment and five dimensions of psychological well-being (self-acceptance, personal growth, personal relationship, purpose in life, and environmental mastery). Attachment (anxiety and avoidance) had a significant indirect effect on the five dimensions when mediated through self-compassion. Consequently, those individuals with higher levels of attachment anxiety and avoidance showed lower levels of self-compassion. This could be because those with higher levels of anxiety and avoidance may find it more difficult to be kind and forgiving to

themselves (Homan, 2016); these findings are similar to the relationship reported by Raque-Bogdan et al. (2016). Although participants were recruited from a community sample, the target age group was those over 60 years of age. What becomes clear regarding the association between attachment and self-compassion, irrespective of age, is that attachment anxiety and avoidance are inversely related to the five dimensions of well-being, and that self-compassion mediates each of these relationships.

Neff and McGehee (2010) also explored the relationship between attachment style and self-compassion among a sample of 235 adolescents and young adults. The authors used The Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) to measure four styles of attachment, and the SCS (Neff, 2003b) to measure self-compassion. In addition, Neff and McGehee (2010) conducted a correlational study investigating whether previous findings regarding the association between self-compassion and well-being in adults (Neff, 2003a) would be similar among adolescents. They also predicted that self-compassionate adolescents would report more social connectedness and less anxiety and depression. Their study found that adolescents and young adults with secure attachments were more self-compassionate. They showed that self-compassion was associated with well-being among adolescents and this was consistent with the findings for young adults as well. The study indicated that adolescents' and young people's attachment and relationships with their parents were associated with self-compassion. Although the findings regarding the relationship between adolescents having a secure attachment with their parents and self-compassion are interesting, because it shows that they may be applicable to those who have not yet reached adulthood, too, the focus of this study was mainly on those young people who had reached adulthood.

There was found to be a negative association between preoccupied and fearful-avoidant attachment styles and self-compassion, yet the dismissive-avoidant attachment style was not significantly associated with self-compassion. Neff and McGehee (2010) concluded that parents who are warm, caring and supportive can positively influence the way in which a child relates to themselves. Those individuals with higher levels of self-compassion also reported less depression and anxiety as well as feelings of greater connectedness in their relationships. The Self-Compassion Scale showed that there was a positive correlation with social connectedness with others.

Beduna et al. (2019) also used a structural equation model to test whether bullying during childhood had a negative effect on mental health that lasted into adulthood and manifested as shame, and whether the ability to regulate emotion and self-compassion would partially mediate this effect. The 26-item Self-Compassion Scale (Neff, 2003b) and the 12-item short version of the ECR (ECR-S; Wei et al., 2007) were used to measure self-compassion and attachment in the model, and the results showed that attachment and self-compassion had a positive significant direct effect ($\beta=.37$, $p < .01$). In particular, there were found to be significant indirect paths from attachment to shame via the mediator of self-compassion, as well as from bullying to shame via self-compassion. These results demonstrate that secure attachment styles and self-compassion may positively affect emotional outcomes.

The final three studies aimed to examine the association between attachment anxiety and avoidance and different dependent variables mediated by self-compassion. Bugay-Sökmez et al. (2021) examined the mediating and moderating effects of attachment anxiety and avoidance, self-esteem, and self-compassion on rumination. The results showed that self-compassion mediates the relationship between self-esteem and brooding, attachment anxiety and brooding,

and self-esteem and co-rumination. Of particular interest was the finding that attachment avoidance was not related to reflection for those with high levels of compassion; those with low self-compassion had a high level of reflection when they also displayed high attachment avoidance. Bugay-Sökmez et al. (2021) suggest that future research studies should be undertaken in order to understand more about why attachment avoidance enhances a person's capacity for reflection when they have low self-compassion. Additionally, inconsistent results were found regarding a positive association between attachment anxiety and a high level of reflection.

Carbonneau et al.'s (2021) study examined the association between adult attachment anxiety and adult attachment avoidance with intuitive eating, mediated by self-compassion, in 201 French-Canadian women. The findings suggest that women with an insecure attachment, as well as with high attachment anxiety or attachment avoidance, are less intuitive whilst eating when they have lower levels of self-compassion. Self-compassion fully mediated the relationship between intuitive eating and attachment avoidance, but attachment anxiety only partly mediated the relationship. Furthermore, self-compassion was found to be able to facilitate more intuitive eating in adult women, especially those who had insecure attachment styles with their romantic partners.

The final paper that examined the relationship between attachment and self-compassion was by Moreira et al. (2015), who used the Portuguese version of the ECR-RS (Fraley et al., 2011; Moreira et al., 2015) and investigated a sample consisting of 290 mothers of school-aged children. The study examined whether attachment-related anxiety and avoidance were associated with mindful parenting when self-compassion was the mediator. The findings suggest that when there is a greater secure attachment in a relationship with a maternal figure,

this contributes to developing the self-compassion that in turn helps parents to develop a mindful parenting approach towards their children. From a theoretical perspective, it is likely that self-compassion mediates the association between attachment style and positive outcomes. Interestingly, the participants' mothers had mean ages of 41.66 years, which was much older than those in the other studies generated by the literature search. The results showed that higher levels of attachment-related anxiety and avoidance were, in fact, associated with low levels of self-compassion. This is consistent with the other studies in this review, which investigated sample populations whose mean age was lower. Therefore, it may be that age has no bearing on the relationship between parenting styles and self-compassion when mediated by adult attachment. This offers an interesting perspective on parenting. However, the focus of this study was on current parenting practices rather than retrospective parenting during childhood.

2.5.4 Conclusion: The relationship between Attachment and Self-compassion

All the other studies in this review used attachment as the predictor and self-compassion as a mediator between attachment and different constructs (e.g. subjective well-being, body appreciation). They all used various combinations of the ECR, and the SCS was used in four of the studies, while one study (Homan, 2010) used the SCS short form, and two studies (Moreira et al., 2014a; 2015) used the Portuguese version of the SCS. The studies all explored the relationship between adult attachment and self-compassion and consistently reported that attachment anxiety was negatively associated with self-compassion. However, there were inconsistencies in terms of the relationship between attachment avoidance and other constructs, with the mediating factor of self-compassion. The findings regarding attachment anxiety and self-compassion were more consistent, though. Much of the research on attachment anxiety and avoidance reported different and often inconsistent results in relation to attachment, particularly in the case of avoidance. Although attachment avoidance is significantly correlated

with self-compassion, the results produced by the mediation models were often inconsistent compared to those for attachment anxiety. This may be due to the suppression of attachment thoughts and emotions (Mikulincer & Shaver, 2007). Many studies use adult attachment (anxiety and avoidance) as the independent variable with other dependent variables and take self-compassion as the mediator, focusing mainly on how self-compassion mediates two negative variables.

2.5.5 Parental Behaviour, Attachment and Self-compassion

Of the published work generated by both searches - parental behaviour and self-compassion; and attachment and self-compassion - only two studies (Pepping et al., 2015; Naismith et al. 2018) included three components of the literature search (parental behaviour, attachment, and self-compassion).

Naismith et al. (2019) explored the possible origins of self-compassion, fear of compassion, shame and self-criticism among 53 participants diagnosed with a personality disorder and how these relate to adverse childhood experiences and attachment. The measure used for parenting was the Early Memories Warmth and Safeness Scale (EMWSS) (Bernstein et al., 2003). The EMWSS is a 21-item single-factor measure of warmth, safety and being cared for in childhood and is assessed using a 5-point Likert scale. The 12-item SCS-Short form scale (Raes et al., 2011) was used for measuring self-compassion. The researchers posited that the origins of low levels of self-compassion could be located in shame, self-criticism and fear of compassion, and the study findings confirmed this. However, they also found that early life experiences have a strong influence. In addition, they discovered that low self-compassion was uniquely predicted by a lack of early parental warmth but not parental rejection. Therefore, understanding the processes operating in psychopathology, when formulating the difficulties experienced by

clients, depends on whether the focus is on adverse childhood experiences or attachment styles (Naismith et al., 2019).

Only parental warmth (not parental rejection) significantly correlated with self-compassion and self-assurance. Like Kelly and Dupasquier (2016), Naismith et al. (2019) only used certain items from the SCS rather than all of them; however, this is consistent with the view that parental warmth in the early years is essential for an individual's ability to develop a soothing system (Gilbert, 2010). Naismith et al. (2019) state that theirs was the only study of a clinical population to date to identify that low levels of self-compassion positively predicted attachment-related avoidance, which supports the social mentalities model (Mackintosh et al., 2018). However, Mackintosh et al. (2018) examined attachment and self-compassion in a clinical population using the full SCS (Neff, 2003b). In a non-clinical population, self-compassion and self-reassurance produced weak negative correlations with attachment avoidance (Gilbert et al., 2011; Pepping et al., 2015).

Pepping et al. (2015) were the first to investigate how adult attachment mediated the association between experiences of parenting in childhood and individual differences in self-compassion in adults. They used the s-EMBU (Arrindell et al., 2001) to examine the concept of retrospective experiences of parenting received in childhood and self-compassion among 329 undergraduate psychology students in the United States. The proposed underlying association between childhood parenting experiences and self-compassion was mediated by attachment, suggesting that poor parenting was associated with lower self-compassion. They found that this association was mediated by attachment anxiety but not attachment avoidance. Their results suggested that experiences in early childhood may influence attachment, which in turn may influence the development of self-compassion. Pepping et al.'s (2015) results supported the

previously identified association between parenting in early childhood and attachment (Grossman et al., 2005) and the association between attachment anxiety and self-compassion (Raque-Bogdan et al., 2011). Therefore, Pepping et al.'s (2015) study established the link between the parenting style (rejection, protection, emotional warmth) received in childhood and attachment anxiety, which, in turn, predicted low self-compassion.

Pepping et al.'s (2015) mediation model does not suggest that attachment is the only mechanism by which perceived parenting in early childhood is related to the development of self-compassion, as attachment only accounted for 15% of the variance in self-compassion. Furthermore, Pepping et al. (2015) believe it is likely that the relationship between retrospective parenting received in childhood and self-compassion is complex. However, they do not appear to have reported any results indicating a direct association between attachment and self-compassion, nor whether they tested for this potential association. Consequently, it makes it more difficult to compare the findings to results obtained from previous studies examining attachment and self-compassion.

2.5.6 Conclusion: The relationship between Parental Behaviour, Attachment and Self-compassion

With regard to the three studies that examined parenting, adult attachment and self-compassion, there was no consistency between them. Although Naismith et al. (2018), measured retrospective parenting, the measure used was a single factor measure that only measured warmth, safety and being cared for in childhood. Retrospective parenting received in childhood predicts self-compassion and attachment anxiety, but not attachment avoidance, which mediates this relationship. Parental warmth is significantly correlated with self-compassion

(Kelly & Dupasquier, 2016) and is consistent with the development of the soothing system early in life and the development of self-compassion (Gilbert, 2010).

2.5.7 Self-compassion, Fears of Compassion and Social Connectedness

Three studies explored the association between self-compassion and social connectedness, of which two (Neff & McGehee, 2010; Kelly & Dupasquier, 2016; Liu et al., 2020) have been previously discussed. The third study, by Liu et al. (2020) examined whether self-compassion and social connectedness could buffer the interaction between racial discrimination and depression in a sample population of Asian Americans. The results supported the idea that two components of self-compassion (self-kindness and mindfulness), and social connectedness, moderated the effect of racial discrimination on depression. They suggest that the results of their study support existing evidence regarding the protective roles played by self-compassion and social connectedness. Neff and McGehee (2010) found a significant positive correlation between feeling social connectedness and self-compassion; they demonstrated that self-compassion acted as a significant and partial mediator between maternal support and connectedness, as well as among other measures of well-being.

Both Neff and McGehee (2010) and Liu et al. (2020) measured social connectedness using The Social Connectedness Scale (Lee & Robbins, 1995). Kelly and Dupasquier (2016) used the Social Safeness and Pleasure Scale (SSPS; Gilbert et al., 2009), which not only measures social connectedness but also warmth, safeness and reassurance in social relationships. The correlations between self-compassion and social safeness were found to be significantly and negatively correlated. They suggest that social safeness may be the core mechanism in the relationship between early parental warmth and an individual's capacity to receive compassion from others.

Four studies that met the inclusion criteria examined fears of compassion in relation to social connectedness. All four studies used the Fears of Compassion Scale (FCS; Gilbert, McEwan, Matos et al., 2011). Only two studies examined fears of compassion in relation to social connectedness (Kelly & Duprasquier, 2016; Best et al., 2021) while a further study explored fears of compassion and attachment (Jeong et al., 2017).

As previously stated, Kelly and Dupasquier (2016) measured social connectedness using the Social Safeness and Pleasure Scale (SSPS; Gilbert et al., 2009). They found that there was a significant total indirect effect of parental warmth on fear of self-compassion. When mediation was included in the model, the direct effect on the relationship between parental warmth and fear of self-compassion became non-significant, and a specific indirect effect through social safeness was observed. In regard to fears about receiving compassion, there was found to be a significant total indirect effect of parental warmth on the fear of receiving compassion and a partial mediation effect when the mediators were added to the model. An indirect effect occurred only through the mediator of social safeness.

Using The Social Connectedness Scale (Lee & Robbins, 1995), Best et al. (2021) explored loneliness and its relationship with social connectedness, social safeness, subjective happiness and fears of compassion. Social connectedness was significantly and negatively correlated to a fear of self-compassion, a fear of receiving compassion and a fear of compassion towards others. Social safeness and loneliness had the strongest negative correlation. Social safeness and social connectedness were found to be highly correlated. Loneliness predicted levels of social connection and social safeness, and based on the study's results, Best et al. (2021) suggest that there is an overlap between the two constructs.

As previously discussed, Jeong et al. (2017) investigated the mediating roles of both self-compassion and fears of compassion in the relationship between insecure attachment and depression. They suggest that fears of compassion are negatively associated with self-compassion and that greater fears of compassion are related to individuals feeling less self-compassion. Attachment anxiety and avoidance were both found to be positively and significantly related to fears of compassion.

Wang et al. (2023) examined the relationship between parenting and fear of compassion for oneself and from others when mediated by self-acceptance. Parenting was measured using the Parental Bonding Index (PBI; Parker et al., 1979). Both mothers and fathers were scored separately based on participants' memories of their early experiences before they were sixteen. The results showed that there was no significant difference between the mean scores for paternal and maternal care. However, levels of maternal overprotection were significantly higher than those of paternal overprotection. Parental overprotection correlated positively with fear of compassion and parental care. The study found that self-acceptance played a mediating role in the relationship between parental care and overprotection and fears of compassion for oneself and from others.

2.5.8 Conclusion: Self-compassion, Fears of Compassion and Social Connectedness

There appears to be a paucity of literature pertaining to the role played by social connectedness and fears of compassion in the relationship between perceived parenting, adult attachment and self-compassion. The studies that explored social connectedness in relation to self-compassion or fears of compassion demonstrate that social connectedness has a positive correlation to self-compassion and is negatively correlated to fears of compassion. Fears of compassion are

negatively associated with self-compassion, which means that, the greater the fear of compassion, the lower the levels of self-compassion. Additionally, there may be differences between paternal and maternal influences in the relationship between overprotection and fears of compassion for oneself and from others.

2.6 Discussion

2.6.1 Overview of the results

The literature reviewed in this chapter has examined the relationship between self-compassion and perceived parenting in childhood, adult attachment, social connectedness and fears of compassion. Many of the studies in the literature review use different methods to assess and measure attachment and memories of parenting in childhood. Evidence of a relationship between parenting and self-compassion was found in five studies. All of these used different parenting measures, but they also all used some version of the Self-Compassion Scale (Neff, 2003a). Fifteen studies examined the relationship between attachment and self-compassion, all of which used a variation of the ECR, with the exception of one paper (Neff & McGehee, 2010) that employed an RQ (Bartholomew & Horowitz, 1991) measure. All of them used a version of the Self-Compassion Scale (Neff, 2003a). Finally, the two studies that contained all three search subjects used the ECR, albeit different versions of it, and both used the Self-Compassion Scale.

2.6.2 Parenting and Self-Compassion

Six studies investigated the relationship between parenting and self-compassion, and although they all used different scales to measure parenting, they all found evidence of a positive relationship between nurturing parenting and self-compassion. This supports the findings of previous research which suggest that a secure base may facilitate emotional resilience

(Mikulincer & Shaver, 2005) and self-to-self-relating (Irons et al., 2006). Those with a secure base are more likely to have a greater capacity to self-soothe and, ultimately, a greater capacity for self-compassion (Neff, 2003a). Poor parenting has been shown to be associated with low self-compassion, so it is important to acquire a greater understanding of what may determine how self-compassionate a person may be so that appropriate therapeutic interventions may be employed to enable an individual to enhance their self-to-self relating and, in turn become more compassionate towards themselves.

2.6.3 Self-compassion as a mediator or an outcome

Of the five studies in this review that examined the relationship between parenting and self-compassion, two used self-compassion as the mediator (Potter et al., 2014; Westphal et al., 2016) in the relationship with other outcomes such as social anxiety and mental health problems (PTSD, BPD; MDD). However, the remaining three studies used self-compassion as the outcome variable (Kelly & Dupasquier, 2015; Satici et al., 2015; Farnworth et al., 2016). Only Satici et al. (2015) explored the direct relationship between caregiver validation and self-compassion. Kelly and Dupasquier (2015) examined the relationship between parental warmth and self-compassion when mediated by social safeness, while Farnworth et al. (2016) explored the relationship between caregiver validation and self-compassion mediated by fear of emotion. According to Pepping et al. (2015), the relationship between early childhood experiences and self-compassion is complex and is not the only mechanism by which parenting can affect self-compassion (Pepping et al., 2015).

Only two studies in this review examined the relationships between retrospective experiences of parenting during childhood, self-compassion, and attachment (anxiety and avoidance). Pepping et al.'s (2015) study supports the findings from previous literature in the sense that

parenting in childhood was shown to affect how self-compassionate a person is, and a person's attachment style may be one concept that mediates this relationship. They found that attachment anxiety (but not attachment avoidance) mediated the relationship between a high level of parental rejection and overprotection, low parental warmth in childhood, and low self-compassion. Nonetheless, if it only accounts for 15% of the variance in self-compassion, then it is also important to identify other concepts or factors that could potentially mediate the parenting-self-compassionate relationship. Self-compassion relates to how an individual feels about themselves, but parenting is an external influence that affects how a person may relate to themselves. Therefore, it is possible that other relationships may influence this association. Pepping et al. (2015) claim that individual differences are very complex, and thus additional factors are likely to be involved in this process.

The studies in this literature review exploring the relationship between parenting in childhood and self-compassion reported that early life experiences directly affect self-compassion. From a theoretical perspective, those with greater attachment security should have a positive association with self-compassion because they usually find it easier to tap into feelings of self-care than those with insecure attachment (Neff & McGehee, 2010). Individuals with higher levels of self-compassion report having greater satisfaction in their romantic relationships (Neff & Beretvas, 2013). This suggests that the way in which individuals function in their relationships may also be rooted in their early attachment experiences.

Many of the studies explored in this literature review used self-compassion as a mediator which was often found to have a positive effect on mainly negative factors. Although high levels of self-compassion may lead to a range of positive outcomes, those with low self-compassion may be resistant to increasing their self-compassion or have blocks which prevent them from doing

so. Therefore, exploring the idea of self-compassion and other flows of compassion as a dependent variable may advance our understanding of individual differences in compassion.

Joeng et al.'s (2017) results support the findings of previous studies (Mikulincer & Shaver, 2007) which suggest that attachment anxious and avoidant individuals are afraid of self-compassion, and so fears of compassion were negatively associated with self-compassion. Social connectedness was also significantly and negatively associated with fears of compassion (Best et al., 2021) and positively associated with self-compassion (Neff & McGehee, 2011). There is evidence to suggest that social connectedness is positively related to well-being in many ways (e.g. Lee et al., 2001; Lee & Robbins, 1998; Neff, 2003b) and that it provides a key social resource when dealing with adverse life experiences (Ungar et al., 2013).

Bowlby's attachment theory highlights the notion that social connectedness is important both in early and later life stages and that this influences behavioural patterns in adolescence and adulthood (Lee et al., 2001) including secure, anxious and avoidant attachment styles. Therefore, social connectedness may have the potential to be used as a mediator in order to establish whether it could explain further individual differences in self-compassion. In fact, although there is no evidence that social connectedness plays a mediating role in regard to individual difference in compassion, it may be a protective factor in the relationship between parenting in childhood and compassion.

2.6.4 Gaps in the literature

Pepping et al.'s (2015) findings from their mediation model suggest that attachment is not the only mechanism by which perceived parenting in childhood is related to the development of self-compassion and that it accounts for only 15% of the variance. Therefore, it is useful to

consider what other construct(s) could account for some of the variance in levels of self-compassion.

Among other things, self-compassion is also associated with social connectedness and greater relationship satisfaction (Barnard & Curry, 2011; Neff & Beretvas, 2013; Neff, 2011b). As mentioned in the previous chapter, Neff and McGehee (2010) discovered that self-compassion was positively associated with social connectedness among adolescents and young adults. They proposed that we must be aware of our connectedness to the human experience, because doing so can help to keep our emotions in perspective (Neff, 2011a). Lee and Robins (1998) reported that higher perceived connectedness to others - i.e. higher social connectedness - was associated with low levels of anxiety, while Gilbert (2005) suggests that self-compassion can improve well-being when individuals feel cared for, connected to others and emotionally calm.

Social connectedness is a sense of belonging (or a lack thereof), and it engenders an enduring interpersonal social closeness between what the individual experiences and their experience of the social world. These experiences include relationships with family, friends, peers, the community and society as a whole (Lee & Robbins, 1998). Therefore, social connectedness may act as a protective factor for those who perceive their parenting in childhood as poor. A child with a secure attachment history may be relatively secure as a young adult and have well-functioning friendships (Gillath et al., 2016, p. 76). Although there is no direct evidence that social connectedness plays a protective role between perceived parenting and compassion, it is worth exploring the relationships between them because little research has been undertaken on social connectedness as a mediating factor.

A review of the relevant literature has demonstrated a link between perceived parenting in childhood and self-compassion or between perceived parenting in childhood and adult attachment. Only one study demonstrated the link between perceived parenting in childhood and self-compassion when mediated by adult attachment (Pepping et al 2015). However, no existing studies have reported findings with regard to paternal and maternal influences on this relationship. No research could be found that has examined the relationship between perceived parenting in childhood and self-compassion when mediated by social connectedness. Additionally, many studies have used different measures to assess each of the relationships of interest involved in this area of research. One of the main purposes of the current study is to use highly validated measures to assess attachment: self-compassion, perceived parenting and social connectedness. However, no known research has used the English version of the s-EMBU in a UK community population. Therefore, a psychometric examination was deemed necessary for this study. Researchers have theorised that self-compassion is not just about the self in isolation but within a wider context. However, no research could be found that examined the relationship between perceived parenting in childhood and different dimensions of compassion, such as compassion for others, from others, and self-compassion.

2.6.5. Strengths and Limitations of the Literature Review

Neff's (2003a) SCS was consistently used throughout the studies reviewed, albeit that they used various versions. Therefore, using other measures of compassion and examining different dimensions may offer a deeper understanding of the relationship between the variables. Some studies used the total SCS score, while others only used the positive scales. Of the studies that looked at retrospective parenting and self-compassion, no consistent measure was used. However, the ECR (Fraley et al., 2000) was consistently used to measure adult attachment, albeit that it produced different results, especially in the case of attachment avoidance. Only

two studies included all three components (parenting in childhood, adult attachment, and self-compassion). However, no study has yet explored the mediating roles of adult attachment and social connectedness in the relationship between parenting in childhood and compassion.

All of the studies used self-report questionnaires, which can give insight into an individual's experience of compassion. One of the inclusion criteria was that the studies had to be in English, and this may have caused relevant studies in other languages to be overlooked. Some of the studies were correlational studies, but the majority involved mediation models. There was a paucity of studies on social connectedness and fears of compassion in the literature. This highlights that more research is needed to understand the potentially protective role played by social connectedness in the relationship between poor parenting in childhood and self-compassion. The literature review has provided an overview of the current literature pertaining to the variables (self-compassion, fear of compassion, parenting in childhood, adult attachment and social connectedness) identified for investigation in this thesis. It highlights the need to consider other measures of compassion, such as the Compassionate Engagement and Action Scales (Gilbert et al., 2017).

2.7 Chapter Summary

This chapter has reviewed the current literature in relation to self-compassion and parenting, and self-compassion and attachment. Relationships were consistently found between retrospective memories of parenting in childhood and self-compassion, as well as between attachment styles and self-compassion. Although the studies in the literature on attachment and parenting employ many different measures, when examining self-compassion, they all used a version of Neff's (2003b) Self-Compassion Scale to measure self-compassion. There is a scarcity of literature on retrospective memories of childhood, attachment and self-compassion,

with only two published papers on this theme. In addition, there is a lack of empirical literature on what might account for the individual differences in self-compassion. Increasing this body of literature is important to help us understand how and why low self-compassion occurs. Therefore, this thesis aims to explore the mediating roles of adult attachment and social connectedness in order to extend the current literature. All the studies in the literature review used cross-sectional data; therefore, causality cannot be determined. However, cross-sectional studies can at least serve as a starting point for future studies.

2.8 Research Aims

This thesis consists of separate sets of research aims related to the different models presented in each of the chapters. It aims to build on previous research to further investigate the origins of individual differences in self-compassion. It is anticipated that parenting received in childhood (warmth, rejection, overprotection) will predict levels of self-compassion and that these associations are mediated by attachment. As Pepping et al.'s (2015) mediation model could only account for approximately 15% of the individual differences in self-compassion, this shows that it is not the only mechanism by which perceived parenting in childhood might predict self-compassion. Therefore, social connectedness has the potential to be a mediating variable in this study.

This research aims:

1. To explore the relationship between perceived parenting behaviour and compassion when mediated with adult attachment.
2. To explore the relationship between perceived parenting behaviour and compassion when mediated with social connectedness.
3. To explore the relationship between perceived parenting behaviour and compassion when mediated with adult attachment and social connectedness.

2.9 Research Objectives

Research objectives of this research:

1. To determine whether there is a relationship between perceived parenting behaviour and compassion when mediated with adult attachment.
2. To determine whether there is a relationship between perceived parenting behaviour and compassion when mediated with social connectedness.
3. To determine whether there is a relationship between perceived parenting behaviour and compassion when mediated with adult attachment and social connectedness.

The literature suggests that there is an association between parenting behaviour and self-compassion and fears of compassion; and between parenting behaviour and adult attachment and self-compassion. There is a paucity of literature on the relationship between perceived parenting behaviour and aspects of compassion and the mediatory roles of adult attachment and social connectedness. The aims and objectives of this research are exploratory in nature. Therefore, hypotheses are not offered as no prior assumptions can be made about the mediating role of adult attachment and social connectedness. Instead, it is proposed to explore the relationships between these components and sub-components of perceived parenting behaviour, compassion, adult attachment and social connectedness. Further investigation into the role of adult attachment and social connectedness is proposed in an order to address a series of research questions.

2.10 Research Questions

Chapters four through to six address each research question pertaining to that chapter's particular construct of compassion: For example, Chapter Four, the Self-Compassion Scale (SCS; Neff, 2003b); Chapter Five, the Compassionate Engagement and Action Scales (CEAS;

Gilbert et al., 2017); and Chapter Six, The Fears of Compassion Scale (FSC; Gilbert et al., 2011). This will help to establish the mediatory roles played by adult attachment and social connectedness in the relationship between perceived parenting and compassion. Research Question One is designed to establish whether there is a relationship between perceived parenting style and compassion. Of those parenting styles related to compassion, Research Question 2 sets out to establish whether there is a relationship between perceived parenting in childhood and adult attachment. This leads on to Research Question 3, which addresses the mediating role of adult attachment. Building on these relationships, Research Question 4 attempts to determine whether there is a relationship between perceived parenting in childhood and social connectedness, and in turn, what is the nature of that relationship. Research Question 5 addresses the mediating role of adult attachment. Finally, through serial mediation, Research Question 6 is designed to determine the mediating roles of adult attachment and social connectedness in the relationship between perceived parenting styles and compassion.

2.11 Rationale for the current research

A mediation model is a useful analysis that identifies an underlying process or mechanism by which a third variable affects the relationship between two other variables (dependent and independent variables). In this research the mediating variables of adult attachment (anxiety and avoidance) and social connectedness explores the relationship between perceived parenting in childhood and various compassion variables. Before running the mediation models, it is essential to first evaluate the psychometric properties of the two scales used in the mediation models. In the following chapter, a confirmatory factor analysis (CFA) is conducted to examine the two scales' construct validity and internal reliability among a community sample from the United Kingdom. Once the psychometric properties of the two scales have been evaluated, the

following three chapters will explore different dimensions and constructs in the mediation studies.

The first compassion construct will be self-compassion, followed by the three orientations of compassion and finally fears of compassion. Each of the compassion measures (SCS, CEAS, FCS) are explored in different chapters because they measure compassion from very different theoretical concepts, which limits the comparability between them. However, the commonalities between the different compassion measures are invaluable in discovering potential patterns that may provide a greater understanding of the origins of compassion. Finally, the following chapter is an experimental intervention study to discover whether a self-directed intervention has the potential to increase an individual's level of compassion.

The interest for this research stemmed from a curiosity to understand why, for some people, giving compassion seems to be easier and less uncomfortable than having compassion for oneself and, why some people may embrace the idea of self-compassion but find self-compassion more difficult than others. If (self) compassion is related to increased well-being, it is important to see what factors may influence a person's individual differences in self-compassion. These factors are especially important for those who have low self-compassion, in the hope that an individual may increase their capacity for compassion for themselves, which in turn has the potential to improve their mental health and well-being. Not only that but if there is a greater understanding of the origins of what may impede the capacity of compassion development, this knowledge has the potential to have an impact and be used across many settings, such as in health and education, to name a few.

CHAPTER THREE

Confirmatory Factor Analysis

3.1 Introduction

3.1.1 Chapter Overview

Most measures that have been developed are intended for use with the general population. To ensure that measurement error is minimal, it is important that there is confidence in an instrument's ability to accurately assess what it is designed to measure. Validity and reliability are two properties that are important for establishing confidence in a measure. Validity checks whether the instrument measures what it sets out to measure, and reliability assesses whether an instrument can be interpreted consistently across different settings (Field 2018, p. 15).

The purpose of this chapter is to evaluate the psychometric properties of two scales that are used in subsequent chapters. The first measure is the short *Egna Minnen Beträffande Uppfostran* [One's Memories of Upbringing] (s-EMBU; Arrindell et al., 1999); and the second is the *Compassionate Engagement and Action Scales* (CEAS; Gilbert et al., 2017). To date, neither measure has had its psychometric properties explored in a UK community sample, with the exception of the internal reliability, which was assessed in Gilbert et al.'s (2017) study. The s-EMBU (Arrindell et al., 1999) is a Swedish measure that has been translated into English for use with English-speaking participants to measure retrospective parenting in childhood on scales designed for that purpose, and is explored first, followed by an evaluation of the *Compassionate Engagement and Action Scales* (Gilbert et al., 2017), which is a relatively new measure of three aspects of compassion. The confirmatory factor analysis (CFA) examines the construct validity and internal reliability of the scales in a community sample from the United Kingdom. The chapter first introduces the s-EMBU and conducts a psychometric evaluation of it before repeating the same process for the CEAS.

Part One

3.1.2 s-EMBU Overview

Evaluating the s-EMBU is essential as it is used in the following chapters as the measure of parenting received in childhood as a predictor of compassion within a UK community sample. Confirmatory factor analysis (CFA) is used to explore the structure of the English-translated version of the short *Egna Minnen Beträffande Uppfostran* [One's Memories of Upbringing] (s-EMBU). The CFA examines the construct validity of the scales in a community sample from the United Kingdom. This chapter aims to determine: 1) if the proposed model (S-EMBU) fits the data adequately; 2) whether any modifications to the observed variables are required to improve the fit; and 3) measure the internal reliability of the scale by reporting the Cronbach's alpha.

3.1.3 Measures of Child Rearing

According to Rapee (1997), many of the measures that are used to assess perceived parenting behaviour were produced for the particular study in which they were used. However, the three most commonly used retrospective scales measure perceived childrearing of an individual's parents: The Children's Report of Parental Behavior Inventory (CRPBI) (Schaefer, 1965); the Parental Bonding Instrument (PBI) developed by Parker et al. (1979); and The *Egna Minnen av Barndoms Uppfostran* (EMBU: Perris, Jacobsson, Lindstrom, von Knorring and Perris, 1980).

The original CRPBI measure (Schaefer, 1965) contains 26 scales comprised of 260 individual items, which makes this measure very time-consuming to complete. Several of the shorter versions, including the most commonly used short version of the CRPBI, remains lengthy at 108 items (Schludermann & Schludermann, 1970). A 90-item version (Raskin et al., 1971) has

also been created. However, these are still lengthy and time-consuming to complete, especially when used alongside other measures.

The PBI was initially developed to measure two aspects of parenting behaviour: care and overprotection (Parker et al., 1979). However, there remains disagreement (Xu et al., 2016) about the factor structure of the scale: a three-factor model (Cubis et al., 1989; Gomez-Beneyto et al., 1993; Kendler et al., 1987; Murphy et al., 1997; Heider et al., 2005) and a four-factor model have been developed (Suzuki & Kitamura, 2011, Behzadi & Parker, 2015; Liu et al., 2011; Uji et al., 2006). Unfortunately, previous studies have found that there is no general consensus about the factors assessed across different cultures or languages, and few studies have been conducted on population-representative-based samples (Xu et al., 2016). Therefore, it remains unclear whether any of the different factor structures can claim to be superior to the others.

The original version of *Egna-Minnen Beträffande Uppfostran* (EMBU) was developed in Sweden by Perris, Jacobsson, Lindström, von Knorring and Perris (1980). It comprised four factorially-derived subscale measures: Rejection, Emotional Warmth, (Over)Protection, and Favouring Subject. It consisted of 81 items of parents' behaviour for both the mother and father individually. Therefore, it contained 162 items in total - a rather large number - and required lengthy test with the accompanying practical disadvantages that this entailed, like the CRPBI.

According to Ross (1982), the English language version of the 81-item EMBU appeared to be an excellent instrument for use in the familial environment to measure upbringing. However, with the aim of creating a shorter version of the EMBU, researchers have proposed a variety of different versions: the 64-item version (Arrindell et al., 1983), the 37-item version (Aluja &

Barrio, 2006), the 27-item version (Winefield et al., 1994); the 24-item version (Aluja & Barrio, 2006) and the most widely supported 23-item version, the s-EMBU (Arrindell et al., 1999; Arrindell et al., 2005; Li et al., 2012; Yangzong et al., 2017).

The 64-item version of the EMBU was developed in Dutch by Arrindell et al. (1983) and contained the same four subscales as the 81-item version (Rejection, Emotional Warmth, Overprotection and Favouring Subject). Although this version has shown cross-cultural stability across other studies (Arrindell & Van der Ende, 1985; Arrindell, Perris, Denia et al., 1988; Arrindell, Perris, Eisemann et al., 1992), it is still a lengthy, time-consuming measure containing 128 individual questions, especially when used in a survey alongside other measures. The 27-item version created by Winefield et al. (1994) used data collected from Australian participants. Unfortunately, it has not been widely used, and according to Arrindell et al. (2001), the English short 27-item equivalent may encounter the same problem because it lacks factorial validity across a broad sample of nations.

Aluja and Barrio (2006) conducted an exploratory and confirmatory factor analysis on various versions of the EMBU (64, 37, 24, 23 items) in a non-clinical sample of Spanish adolescents. They found that models containing 64, 37 and 23 items did not fit well. They found the 36-item 3-factor version produced more satisfactory results than the 23-item version. The 24-item version had the best construct validity, although their confirmatory factor analysis found that the shortened 24-item and 23-item versions achieved the best fit to the data. In addition, 8 items referring to brothers and sisters were not included because some items were found to be not appropriate across Aluja and Barrio's (2006) 24-item three-factor construct. Other versions of the 23-item measure have also been created specifically for use with children and adolescents (s-EMBU-A: Gerlsma et al., 1991, s-EMBU-C: Castro et al., 1993, Aluja & Barrio, 2006).

Modifications to the adult EMBU were made to assess perceptions of actual parenting rather than recalled parental rearing among adolescents (EMBU-A; Castro et al., 1990; Gerlsma et al., 1991). However, for the purpose of this research, an English adult population was of interest.

Although several criticisms have been made of the shorter 23-item version created by Arrindell et al. (2001), based on Aluja and Barrio's (2006) factor analysis, it should be noted that this version was designed for use in a Spanish adolescent population group, not a UK adult general population group. Therefore, based on the wider usage of the shorter 23-item (Arrindell et al., 2001) three-factor construct in an adult population across national samples, including an English version and the fact that the psychometric findings have been found to be reliable and valid across many countries and languages, Arrindell et al.'s (2001) 23-item version is deemed to be a better shorter version in cases when it would be inappropriate or unfeasible to apply the original longer version.

3.1.4 The sEMBU measure

The 23-item short form s-EMBU measures adults' perceptions of their parents and their upbringing. It contains 23 items divided into three scales: Emotional Warmth (6 items), Rejection (7 items), and Protection (9 items, 1 item not scored). Questions pertaining to the respondent's father and mother are answered separately. In regard to the Emotional Warmth scale, the six items ask questions about experiencing affection, stimulation and praise. In the case of the Rejection Scale, the seven items ask questions about experiencing shaming, abusive or punitive behaviour, siblings being favoured, rejection of the individual and rejection through criticism. The nine items represented on the Protection Scale ask questions about experiencing overinvolvement, intrusiveness, anxiousness and fear for personal safety. Question number 17,

“I was allowed to go where I liked without my parents caring too much”, is positively worded, so it is reverse scored for data analysis, as instructed by Arrindell et al. (1999). Question 9, “My parents tried to spur me to become the best,” is included in the questionnaire, but was not included in the Protection subscales of Arrindell’s scale of development because it failed to show consistently high loadings on the Swedish version of the protection subscale relating to the mother and being salient across Protection and Emotional Warmth (Arrindell et al., 1999; Yangzong et al., 2017).

The s-EMBU can measure the respondent’s memories of the parenting they received from both the mother and father separately as well as measuring their perceptions of each parent’s caregiving behaviour. The s-EMBU was originally developed to collect data from students in Italy, Hungary, Guatemala and Greece. Its factors were factorially invariant across these four nations (Arrindell et al., 1999). It was subsequently extended to students from East Germany and Sweden (Arrindell et al., 1999) and further to students from Venezuela, Spain and Australia (Arrindell et al., 2005).

Arrindell et al. (1999) aimed to construct a reliable and valid short form of the EMBU using the items that had been proven to behave adequately in previous psychometric analyses and would be consistent across many nations, using data from Italy, Hungary, Guatemala and Greece. The s-EMBU for adults has also been validated in some other countries, such as Sweden, Australia, Germany, Spain and Venezuela (Arrindell et al., 2001; 2005; Penelo et al., 2012), China (Li et al., 2012) and Tibet (Yangzong et al., 2017).

Although the s-EMBU has been interpreted and translated into English and used in an Australian population, to the best of my knowledge, the 23-item-EMBU (Arrindell et al., 1999)

has only been used in one UK student sample ($n=225$) from a single university (Gilbert et al., 2003). The Cronbach alpha scores were rated good for overprotection ($\alpha=0.78$) and rejection ($\alpha=0.80$) and excellent for emotional warmth ($\alpha=0.90$) (Gilbert et al., 2003). Other than the Cronbach's alpha scores reported in Gilbert et al.'s (2003) study, the psychometric properties of the s-EMBU are currently unexplored in a United Kingdom (UK) adult sample. Therefore, in this chapter, the s-EMBU is examined for reliability and validity in a UK adult community sample.

3.2 METHOD for the sEMBU measure

3.2.1 *Study Design*

The confirmatory factor analysis (CFA) data was obtained from the cross-sectional data collected from the surveys, which is discussed in detail in Chapter Four and Chapter Five. The study described in Chapter Four was conducted between June 2016 and February 2017, while that explored in Chapter Five was conducted between September 2017 and August 2018. The data used in Chapter Four was collected from an online source. To access as wide an adult community sample as possible, both online and paper methods were used to obtain data for the study explored in Chapter Five.

3.2.2 *Sample Size*

While noted for its flexibility, structural equation modelling specifies a number of assumptions that should be met in order to ensure that the results are trustworthy. To establish an adequate sample size for the requirements of the CFA, a sample of at least 300 is generally required to yield a stable factor result (Tabachnick & Fidell, 2013). Comrey and Lee (1996; cited in Field, 2018) recommend sampling 1,000 subjects as excellent, 300 as good, 200 as fair and 100 as poor.

Other researchers have stated that sample sizes of less than 200 are inadequate, with anything less than 100 being considered too small (Matsunaga, 2010). A ‘rule of thumb’ comprising a ratio of 1 variable to 10-15 participants, was suggested by Field (2018). Arrindell and van de Ende (1985) deduced that a ratio based on the number of variables to participants made little difference to the factor’s stability. However, in the case of small sample sizes, there is a risk of misspecification of models and bias towards existing measurement scales (MacCallum et al., 1999). It is suggested that, when using factor analysis, researchers should obtain the largest sample size possible (Matsunaga, 2010). Given the complexity of recommended sample sizes, this study aimed to obtain between 200 and 300 participants for the completed s-EMBU measure to yield stable factor results (fair to good).

3.2.3 Participants

Due to the fact that the research was examining the reliability and validity of a UK community sample, questionnaire data from both surveys were merged. Only those from the United Kingdom and Ireland were used for this study’s CFA. All participants were over 18 years of age, proficient in English and consented to the use of their data.

In the case of the first online dataset (Chapter Four), participants who did not finish were presumed to have withdrawn consent for their data to be used, reducing the number of responses from 150 to 139 individuals. Of those 139, 9 did not state their country of origin, and a further 36 were not from the United Kingdom, so 94 participants from the United Kingdom were included in the analysis. Those with missing data for either of the measures (s-EMBU; CEAS) were excluded from the data (n=13), leaving a final total of 81 participants.

The second dataset was obtained from a combination of online questionnaires and formatted paper questionnaires (Chapter Five). All the participants (n=87) completed the s-EMBU measure for the second online questionnaire. There were 5 who did not state their country of origin, and a further 23 were not from the United Kingdom, so 59 participants from the United Kingdom remained. 16 participants had missing data from the s-EMBU and CEAS measures and were therefore excluded, leaving a final total of 43 UK participants. In regard to the paper questionnaires (Chapter Five), these were completed and returned by 89 participants. All the participants were over 18 years of age, were proficient in English and, consented to the use of their data and checked the consent box to indicate that they met the inclusion criteria. When the first and second datasets were combined, they produced a total of 213 UK participants. Of these 213 participants, 111 were female (52.1%), 51 were male (23.9%) and 51 were of unidentified gender (23.9%). Their ages ranged between 18 and 84 years, with a mean age of 42.36 years (SD=18.63). The number of participants obtained from the combined studies of UK participants (n=213) met the study's requirements for the sample size (n=200-300).

3.2.4 Measuring Instruments (s-EMBU)

Details of the s-EMBU scale are provided in the introduction section of this chapter (see Appendix A). Each of the 23 questions is scored using a 4-point Likert scale: 1 (no, never), 2 (yes, but seldom), 3 (yes, often), 4 (yes, most of the time). In the case of questions pertaining to the father and mother, those designed to measure rejection are 1, 4, 7, 13, 15, 16 and 21; those designed to measure emotional warmth are 2, 6, 12, 14, 19 and 23; and those intended to measure overprotection are 3, 5, 8, 9, 10, 11, 17, 18, 20 and 23, with question 17 reverse scored and question 9 unscored in the data analysis. Arrindell et al. (1999) reported that the total Cronbach alpha scores for the four countries and languages (Greece, Guatemala, Italy and Hungary) was >0.72 for the fathers and >0.74 for the mothers. The factors of rejection,

overprotection and emotional warmth have been shown to be consistent cross-culturally in many studies, suggesting that the s-EMBU's factorial structure and constituent items have a relatively stable factorial validity (Arrindell et al., 1983; 2001; 2005; Arrindell et al., 2001, Penelo et al., 2012; Eisemann et al., 1984; Li et al., 2012; Gugová & Eisemann, 2016).

3.2.5 Procedures

The participants were recruited through advertisements on websites, internet forums, and social media networks (i.e., Facebook and Twitter). The questionnaires were completed via an online survey, and a paper copy was posted back to the researcher. The survey allowed for participants who did not have either a mother or father as their primary caregivers in childhood to leave certain questions unanswered. Paper copies were used to reach a large number of participants who may not have accessed the online version of the survey otherwise.

3.2.6 Analysis

The data collected online were exported directly from the Qualtrics online survey site directly into IBM SPSS version 29.0 to minimise the potential for error during manual input. All the data from the paper surveys received were manually entered into SPSS and rechecked for any possible input errors. Both datasets were merged into one new combined dataset.

Understanding why there is missing data is essential and should not be ignored. Little's Missing Completely at Random (MCAR) Test was conducted in SPSS to ascertain whether the missing values were missing in a random or non-random way. The question for which there was most missing data for an item was question 15: 'I felt that my parents liked my brothers and sisters more than they liked me', for both the father and mother (father: 5.6%, mother: 7%). The Estimated Means (EM) results showed that the data was missing completely at random (Chi-

Square = 1107.172, DF = 1085, Sig. = .313). Therefore, there is a high probability that the missing data is uncorrelated with the overall nature of the data. A visual check for multicollinearity and singularity was conducted to ensure the data was suitable for factor analysis. The items did not correlate ($r > 0.8$), so correction for multi-collinearity was unnecessary and the sample was therefore deemed suitable for factor analysis (Field, 2018, p. 799). The results of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy showed that the data was 'meritorious' (KMO = .803) (Kaiser & Rice, 1974).

It has been suggested that several fit indicators should be used and reported to properly assess each of the models, such as the Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973), the Incremental Fit Index (IFI) (Jöreskog & Sörbom, 1989), the Root Mean Square Error of Approximation (RMSEA) (Steiger, 1990), the Expected Cross-Validation Index (ECVI) (Browne & Kudeck, 1993) and the Comparative Fit Index (CFI) (Bentler & Bonett, 1980). To add to the numerous complexities associated with model evaluation, recommendations for the cut-off values vary (Bentler & Bonnett, 1980; Hu & Bentler, 1999; Schermellah-Engel et al., 2003). Hu and Bentler (1997) found that strict cut-off values may not work equally for various fit indexes, distributions and sample sizes. Barrett (2007) suggested that fit indices should be abandoned altogether due to the inadequacies associated with adopting strict cut-off values. However, although Yuan (2005) highlights the shortcomings of cut-off values, fit indices are still meaningful in regard to model fit or non-fit. Therefore, it is important to stipulate that the cut-off values for this study adhere to the current 'rule of thumb', but only as a guideline for the acceptability of the model fit. The cut-off points for each of the measures are as follows: a good fit for the RMSEA is < 0.05 , and it has an acceptable fit of < 0.06 ; a good fit for the CFI is > 0.95 and an acceptable fit is > 0.90 ; and in the case of the Tucker-Lewis Index (TLI), > 0.95 is

a good fit and > 0.90 is an acceptable fit (Hu & Bentler., 1999). With regard to the ECVI, the smaller the value the better the fit (Schreiber et al., 2006).

3.2.7 Cleaning the data

All the datasets were individually cleaned in the same way to prepare the data for analysis and checked for errors. Those participants who did not provide consent were removed, and their data was deleted. All the non-UK respondents were excluded from the CFA due to not meeting the requirements for this study. Those participants who gave no country of residence or were identified as having a current country of residence other than the United Kingdom were also removed from the data. All the variables for the UK data were checked and they fell within the expected minimum and maximum range; no spurious data was found. As Item 17 in the s-EMBU is written positively, following Arrindell et al.'s (1999) instructions, it was reverse scored for both the mother and father scales before analysing the data.

3.2.8 Missing data

Any missing data were replaced with the discrete value of '999' to specify where data was missing so that the CFA would run properly. Due to the s-EMBU asking questions about both the mother and father, participants who may not have had a mother and a father figure were shown as having missing data for one of the parent sets of questions. Consequently, Question 15, 'I felt that my parents liked my brother(s) and sister(s) more than they liked me', was the question that was left unanswered more than any other. It was presumed that participants who omitted to answer did not have or did not grow up with siblings. This data was included in the analysis, thus ensuring that the data represented a diverse community sample. In the case of the online s-EMBU surveys, there were no prompts for missing questions, thus enabling participants to leave questions unanswered for either the father or the mother. This also allowed

question 15 to be left unanswered for those without siblings. If the prompt for missing questions had been left intact for this measure, then it may have been cumbersome to prompt for each question omitted. However, some respondents had missed questions among the measures used for the paper version, which could simply have been due to making an error while completing the survey. Out of all the paper surveys, one respondent circled two numbers on the scale in answer to a question, presumably in error, or perhaps because they could not decide on one answer, and therefore, that respondent's data could not be used for that question.

3.2.9 Confirmatory Factor Analysis

The usefulness of the three-factor model (ejection, Emotional Warmth and Overprotection) for each parent has been established and it has been utilised in many studies covering several countries (e.g. Sweden, Australia and Greece). In this research, the CFA was employed to test the validity of a three-factor structure in a UK community sample. IBM AMOS version 25 was used to conduct the confirmatory factor analysis. The Maximum Likelihood (ML) method was used to estimate the parameters of confirmatory factor analytic models because it is the most commonly used procedure (Benson, 1994), which may be partly due to it being the default option in programs such as AMOS and LISREL. Additionally, the assumptions of normality are rarely met with empirical datasets, and ML has been examined for its robustness against violations for a wide range of distributions and shown little bias (Coenders et al., 1997).

To assess the fit of the CFA model, the following measures are suggested: the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the Tucker-Lewis Index (TLI). The cut-off points for each of the measures are as follows: a good fit for RMSEA is <0.05 with an acceptable fit being <0.06 ; an acceptable fit for the CFI is >0.90 and a good fit is >0.95 ; and a TLI value of >0.90 is considered acceptable, while >0.95 is regarded

as a good fit (Hu et al., 1999). Four models were tested and run, which are presented in the figures below. (Figures 3.1 through to 3.4). The usual conventions for path diagrams were used, i.e. latent variables or factors are represented by circles; and the items, or observed scores, are represented by boxes e1 to e23, indicating unique variances or errors. The arrows between the latent variable and the items are factor loadings, and the double-headed arrows between the factors represent correlations. Both questions corresponding to question 17 have a suffix of 'r' to indicate that it is a reverse scored item.

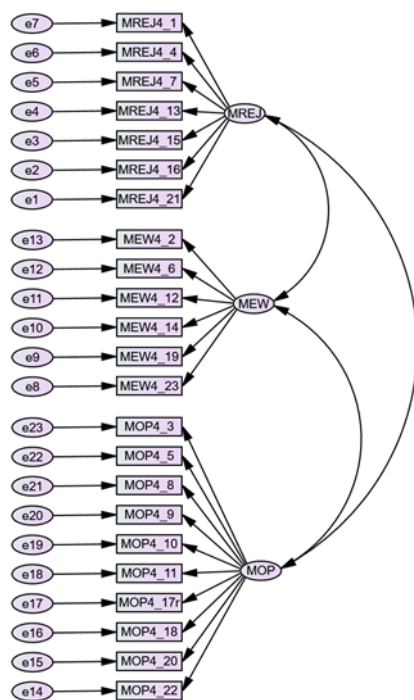


Figure 3.1: Model 1: A 3-factor model of a Father's parenting style (Rejection, Emotional Warmth and Overprotectiveness), including item 9.

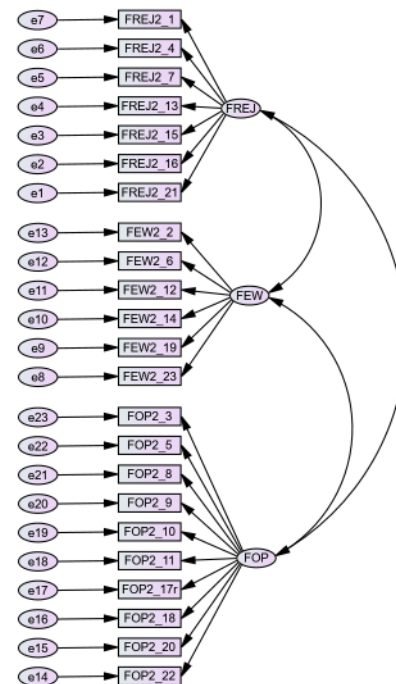


Figure 3.2: Model 2: A 3-factor model of a Mother's parenting style (Rejection, Emotional Warmth and Overprotectiveness), including item 9.

Model 1 (fig. 3.1) is a 3-factor model representing the three factors of the parenting style for Fathers (Rejection, Emotion Warmth and Overprotection) with items labelled for Rejection (FREJ2_1, FREJ2_4, etc.), Emotional Warmth (FEW2_2, FEW2_6 etc.) and Overprotectiveness (FOP2_3, FOP2_5 etc). Model 2 (fig. 3.2) is the same as model 1 but for Mothers' parenting styles, with items labelled for Rejection (MREJ2_1, MREJ2_4, etc.), Emotional Warmth (MEW2_2, MEW2_6 etc.) and Overprotectiveness (MOP2_3, MOP2_5

etc). Models 3 (fig. 3.3) and 4 (fig. 3.4) are the same models corresponding to Fathers and Mothers but excluding item 9.

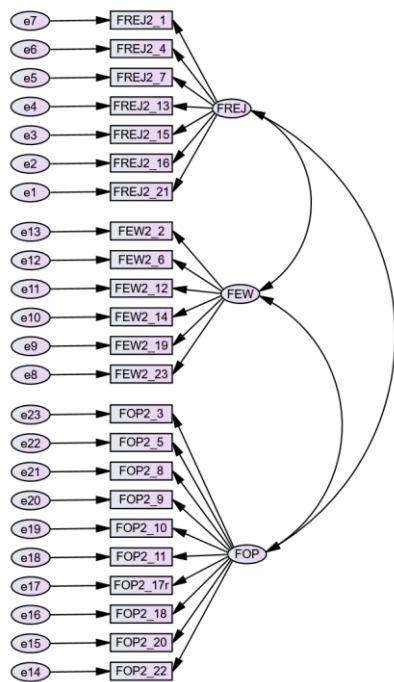


Figure 3.3: Model 3: A 3-factor model of a Father's parenting style (Rejection, Emotional Warmth and Overprotectiveness) excluding item 9.

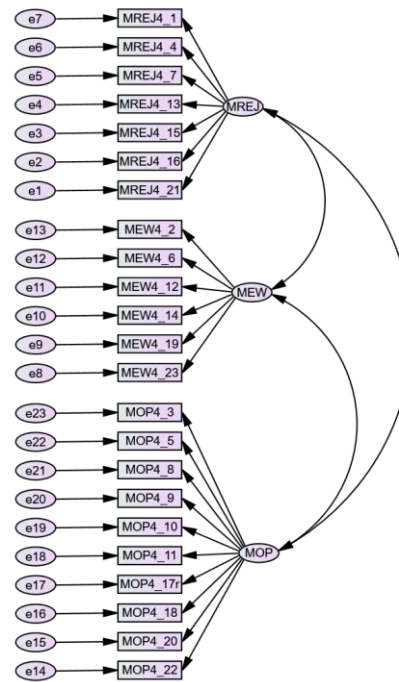


Figure 3.4: Model 4: A-3 factor model of a Mother's parenting style (Rejection, Emotional Warmth and overprotectiveness) excluding item 9.

3.2.10 Internal Reliability

Internal reliability is the measure of the internal consistency of the items within the scale. Typically, higher Cronbach's Alpha values indicate better internal consistency and, therefore, better internal reliability. Guidelines for Cronbach's Alpha suggest that 0.00 to .69 is poor, .70 to .79 is adequate, .80 to .89 is good, and .90 to .99 is excellent (Kline, 1999). In the study of the s-EMBU in English (Australia) carried out by Arrindell et al. (2005), it was demonstrated that the internal consistency was high for father rejection ($\alpha = .84$), father emotional warmth ($\alpha = .90$) and father overprotection ($\alpha = .83$), mother rejection ($\alpha = .84$), mother emotional warmth ($\alpha = .90$) and mother overprotection ($\alpha = .83$) (Arrindell et al., 2005). In a UK student population from the University of Derbyshire ($n=225$), Gilbert et al. (2003) showed that the s-EMBU was reliable, with Cronbach Alpha scores of 0.80 (rejection), 0.90 (emotional warmth)

and 0.78 (overprotection) obtained. In Pepping et al. 's (2015) study of 329 University Students at an Australian university, the s-EMBU demonstrated high internal consistency for emotional warmth (.94), rejection (.88) and overprotection (.87). However, it is unclear from Gilbert et al.'s (2003) and Pepping et al.'s (2015) studies if questions were asked about both parents as only one set of Cronbach alpha scores for parents was reported. Therefore, a fifth model was run to check whether there is a similar structure in terms of the parenting styles when the father and mother measures are combined to create a global parenting 3-factor scale to test (see Appendix B).

3.3. Results for the sEMBU measure

3.3.1 *Sample Size*

For this study, data from 213 participants were used, which meant that the minimum requirement proposed by Tabachnick and Fidell (2013) had not been met. However, Comrey and Lee (1996; cited in Field, 2018) recommend a sample size of 300 as good, 200 as fair and 100 as poor. Therefore, 213 participants would be considered as constituting a fair to good sample size.

3.3.2 *Demographics*

Of the individuals who participated in the study (see Table 3.1), the mean age was 42.4 years, with an age range of between 18 and 84 years. All the participants declared their age, and 162 participants (80%) declared their gender. Of the 213 participants, 84 participants were married (39.4%); 70 participants were single or never married (32.9%); 30 participants lived with their partners (14.1%); 13 participants were separated or divorced (6.1%), and 7 participants were widowed (3.3%). There was missing data for the marital status of 9 (4.2%) participants.

All the participants (n=213; 100%) were from the United Kingdom due to the requirements of the study criteria. On the paper questionnaires, respondents were asked to write the country in which they were currently residing and the following figures were obtained: United Kingdom (n=24), England (n=75), English (n=1), (Great) Britain (n=3), Wales (n=6), Scotland (n=2). All these variables were grouped under the same geographical area, i.e. the United Kingdom. Of those from the United Kingdom, 171 participants (80.3%) identified themselves as white British. There were 99 participants (46%) who had degrees or higher degrees, while 55 participants (25.4%) identified themselves as professional workers and 54 were students (25.4%). Of those who declared other occupations, being retired was the most common.

Table 3.1 Participants' Demographics.

Variable	N	Percentage
Age Groups		
Young Adult (18-35)	85	39.9
Middle Age (36-55)	71	33.3
Older Adulthood (56+)	57	26.8
Missing	0	0
TOTAL	213	100.0
Gender		
Male	51	23.9
Female	111	52.1
Prefer not to say	2	.9
Missing	49	23.0
Total	213	100.0
Marital Status		
Single/Never married	70	32.9
Married	84	39.4
Living with a partner	30	14.1
Separated/Divorced	13	6.1
Widowed	7	3.3
Missing Data	9	4.2
Total	213	100.0
Ethnic Group		
White British	171	80.3
White Irish	5	6.6
Other White Background	14	10.0
Other Black Background	1	.7

White & Black African	1	.7
White & Black Caribbean	2	1.3
White Asian	1	.7
Other Mixed Background	1	.7
Indian	1	.7
Other Asian Background	2	2.0
Chinese	2	.9
Other Ethnicity	2	2.0
Missing Data	9	6.0
Total		100.0
Country		
United Kingdom	213	100.0
Total	213	100.0
Education		
Degree/Higher Degree	99	46.5
Higher Education Qualification	18	8.5
A level or Equivalent	41	19.2
ONC/BTEC or equivalent	12	5.6
GCSE or equivalent (at 16 years)	19	8.9
No formal qualifications	12	5.6
Other	5	2.3
Missing Data	7	3.3
Total	213	100.0
Occupation		
Employer or manager	13	6.1
Professional worker	55	25.8
Non-manual worker	6	2.8
Skilled/semi-skilled manual worker	7	3.3
Unskilled manual worker	3	1.4
Self-employed	18	8.5
Unemployed	7	3.3
Homemaker/Housewife	12	5.6
Student	54	25.4
Other	31	14.6
Missing Data	7	3.3
Total	213	100.0

3.3.3 Unanswered questions in s-EMBU scale

There were 6 paper surveys on which notes were left explaining why respondents had omitted to answer specific questions if they felt that they did not apply to them. One respondent felt that they were unable to answer the questions about their parents due to being at boarding

school from the age of 6. Unfortunately, this participant was excluded from this part of the study because the confirmatory factor analysis needed the data for the s-EMBU, i.e. parenting.

3.3.4 Confirmatory factor analysis (CFA)

CFA was performed using the AMOS 25.0.0 statistical package (Arbuckle, 1999) to find out if the factor structure was a good fit for the data. Initially, four models were analysed: (1) a correlated three-factor model for the father's parenting, including item 9 ('My parents tried to spur me to become the best'); (2) a correlated three-factor model for the mother's parenting, including item 9; (3) a correlated three-factor model for the father's parenting, excluding item 9; (4) a correlated three-factor model for the mother's parenting, also excluding item 9.

The 3-factor models, including item 9 for models 1 and 2 for the father and mother, were the first to be run. All standardised factor loadings for the father were above .40 with the exception of item 9 (.30) and item 17 ('I was allowed to go where I liked without my parents caring too much') (.25), which constituted the reverse scored item within the overprotection factor. With regard to the mother's parenting, a similar pattern was observed. All the factor loadings were above .40, with the exception of item 9 (.10) and item 17 (.17) on the overprotection scale. The factor loading generally accepted cut-off point of .30 indicates medium loading (Brown, 2015). The results for the 'goodness-of-fit' for Models 1 and 2 (see table 3.2) showed that none of the cut-off points for each of the measures were met (RMSEA is <0.05 , with an acceptable fit of <0.06 ; CFI has an acceptable fit of >0.90 , a good fit is >0.95 ; and for the Tucker-Lewis Index an acceptable fit is >0.90 .) (Hu et al., 1999).

Arrindell et al. (2001) removed item 9 from the subscale that it was originally assigned to, because it failed to show satisfactory loadings for three of the four countries studied in relation to both the mother and father's protection factors. In the case of the fourth country, item 9 lost its meaning because it had higher loadings on the Emotional Warmth Scale. To discover whether there would be an improvement in the fit of the model, it was then run with item 9 on the Emotional Warmth Scale. The factor loading for item 9 on the Emotional Warmth Scale was greater than when it was included in the protection subscale (father .52, mother .57). Item 9 was designed to measure overprotection in relation to both the father and the mother. However, in this study, it was found to measure emotional warmth. This finding was consistent with the studies carried out in Australia, Venezuela and Guatemala (Arrindell et al., 2005). Applying the 'goodness-of-fit' measure in this study did not significantly improve the fit. Due to Arrindell et al.'s (2001) removal of item 9 and the results obtained from this study, the decision was taken to remove item 9 from the scale.

The 3-factor model, excluding item 9 for Models 3 and 4 for the father and mother, was run individually. All the standardised factor loadings for the father and mother were above .40, with the exception of item 17. The loadings for the reversed item (17) on the overprotection scale for the father and the mother were low (father .23; mother .16). This was also found to be the case in a Tibetan study of children (Yangzong et al., 2017).

Again, the data was tested for 'goodness-of-fit, and the fit was found to be better than for Models 1 and 2, which included item 9. To find out if there was a better fit, the data was rerun but item 17 was excluded from the protection scale for both the mother and father due to the low loading values. In the case of the father's model, the removal of item 17 did not improve

the fit enough to warrant deviating from Arrindell et al.'s original scale. A similar pattern was observed in the model relating to the mother. Again, none of the cut-off points for each of the model fits were met. The final model was the 3-factor model, with item 9 removed from the scale and item 17 retained. These findings support the results from Arrindell et al.'s (2001) study across different countries and languages.

Table 3.2: Goodness of Fit Indexes for structural models of the sEMBU

MODEL	X^2	df	TLI	CFI	ECVI	RMSEA	90% CI for RMSEA	
							Low	High
Model 1: Father (incl. item 9)	625.322	227 (<i>p</i> =.000)	.813	.846	3.629	.091	.083	.100
Model 2: Mother (incl. item 9)	633.425	227 (<i>p</i> =.000)	.795	.831	3.667	.092	.083	.100
Model 3: Father (excl. item 9)	504.837	206 (<i>p</i> =.000)	.852	.879	3.032	.083	.074	.092
Model 4: Mother (excl. item 9)	518.786	206 (<i>p</i> =.000)	.827	.859	3.098	.085	.076	.094

*NOTE: Chi-Square (X^2) Degrees of Freedom (df) Tucker–Lewis index (TLI) comparative fit index (CFI) expected cross-validation index (ECVI) root mean square error of approximation (RMSEA). All values are significant at *p*<.001.*

To improve the ‘goodness-of-fit’, a more exploratory stance towards the model building was taken by examining the modification indices to determine whether the model fit could be improved. However, this model could not be run in AMOS due to missing data. Because the researcher did not want to delete complete cases with missing data (e.g. having no siblings or a particular parent being absent during upbringing), a data imputation was needed to fill in the missing data. Out of the 213 participants, there were 3 complete cases of missing data pertaining to the father, 2 complete cases relating to the mother and 8 cases for item 15 pertaining to a sibling. Once the missing values are replaced with imputed values, the data analysis can be run for methods that need complete data to function. A regression imputation

was run, and the imputed dataset was run so that modification indices were included within the AMOS results.

Modification indices can help to identify items that are not functioning well and improve a model's fit. However, highly correlated error terms cannot always be relied upon because the software does not know the theoretical framework of the model. Therefore, modifications should be theoretically and practically plausible (MacCallum, 1995), in that they should make theoretical sense and not merely increase or decrease the parameters.

The higher scoring error terms were examined in both the case of the mother and father to see if there were any paths on the same variable that could improve the model's fit. The modification indices for the father model showed a high MI score for error covariance between item 4, 'It happened that my parents gave me more corporal punishment than I deserved', and item 21, 'My parents would punish me hard, even for trifles (small offences)' (.30). From a theoretical perspective, both of these items are asking similar questions relating to receiving harsh and unfair punishment from a parent. The modification indices for the father and mother models showed high MI scores for items 4 and 21. The items with the higher covariants in the mother model were item 1, 'It happened that my parents were sour or angry with me without letting me know the cause', and item 4, 'It happened that my parents gave me more corporal punishment than I deserved' (.31). A possible reason for the covariance could be that both questions began with, 'It happened that my parents.....'

To ensure that post-hoc modification of a model is kept to a minimum (MacCallum, 1995), only one of the higher error indices was covaried on each model. Although the fit improved, it

only moved by a small amount nearer to the traditional cut-off scores. This may be due to the decision not to delete item 17 for both the mother and father models on the variant of overprotection and other highly correlated item pairs. The table below (Table 3.3) shows that there was an improvement in the model fit, which, according to the ‘rule of thumb’ cut-off criteria, was acceptable, although there was a slight increase in the ECVI scores for both the father and the mother. The largest improvement was seen in both the TLI scores for the father and mother, but to a greater extent for the mother’s score. Based on the reliability analysis model, Model 3 was chosen even though a couple of items appeared to be theoretically similar and remained in the model in order to improve its fit.

Table 3.3 Improving ‘Goodness-of-Fit Indexes’ for the sEMBU models.

MODEL	χ^2	df	TLI	CFI	ECVI	RMSEA	90% CI for RMSEA	
							Low	High
Father:								
Model 5 (imputed): Father (excl. item 9)	515.240	206 (<i>p</i> =.000)	.867	.881	3.081	.084	.075	.093
Item 2 -> Item 21	498.455	205 (<i>p</i> =.000)	.873	.887	3.012	.082	.073	.091
Mother:								
Model 6 (imputed): Mother (excl. item 9)	521.011	206 (<i>p</i> =.000)	.849	.865	3.109	.085	.076	.094
Item 4 -> Item 1		205 (<i>p</i> =.000)	.856	.872	3.036	.083	.074	.092

NOTE: Chi-Square (χ^2) Degrees of Freedom (df) Tucker–Lewis index (TLI) Comparative Fit Index (CFI) Expected Cross-Validation Index (ECVI) Root Mean Square Error of Approximation (RMSEA). All values are significant at $p < .001$.

3.3.5 Reliability of the s-EMBU scale

The internal consistency reliability (Cronbach’s alpha) was calculated for each of the subscales and the values are reported in Table 3.4. Alpha coefficients with a value above .7 are considered good, and all the variables’ coefficients in Table 3.4 were above $\alpha = .7$. This means that all the variables used in the sample demonstrate good internal reliability (Field, 2013). However, there

was a large difference between the reliability of the Rejection subscale (Father $\alpha=.92$; Mother $\alpha=.90$) and that of Overprotection (Father $\alpha=.77$; Mother $\alpha=.79$).

Table 3.4. Reliability of the s-EMBU subscales

Item No.	Number of Items	Cronbach Alpha
Rejection (Father)	7	.92
Rejection (Mother)	7	.90
Emotional Warmth (Father)	6	.89
Emotional Warmth (Mother)	6	.89
Overprotection (Father)*	9	.77
Overprotection (Mother)*	9	.79

* Excluding item 9

3.4 Discussion

3.4.1 Chapter Aims

This chapter had two main aims: 1) to determine whether the proposed model (s-EMBU) fitted the data adequately for a general UK population; and 2) to measure the internal reliability of the scale. It was important to undertake this evaluation as the s-EMBU - the measure of parenting received in childhood - is used as a predictor of compassion in the following chapters.

3.4.2 Goodness-of-Fit

To the best of the author's knowledge, no evaluation of the properties of the s-EMBU English version has been conducted in the UK, except in regard to internal reliability (Gilbert et al., 2017). The CFA model used in this study (Model 3) resulted in an acceptable or reasonable fit, and therefore the final model for both the mother and the father was the same as the original 23-item 3-factor structure model. As previously stated, the EMBU has been demonstrated to

be valid and reliable across many countries, languages and age groups (Rojo-Moreno, Livianos Aldana, Cervera-Martínez & Dominguez-Carabantes, 1999; Livianos-Aldana & Rojo-Moreno, 2003; García, Aluja & Del Barrio, 2006; Oldehinkel, Veenstra, Ormel, de Winter & Verhulst, 2006).

Due to the proliferation of ‘goodness-of-fit’ indices, it can be difficult for researchers to know which one to use. Tanaka (1993) suggests reporting a minimum number of fit indices from at least one of each family of indices. Jackson et al. (2009) suggest that, as there is no general consensus on the minimum number of fit indices to report, it would be advisable to include the Chi-Square, Degrees of Freedom and its p-value, an index that describes the incremental fit (i.e. TLI, CFI), and a residual-based measure (RMSEA). This study therefore included the ‘goodness-of-fit’ measures suggested by Jackson et al. (2009).

3.4.3 Model Items

In the original study by Arrindell et al. 2001, item 9, ‘My parents tried to spur me to become the best’, was removed from the scoring because it failed to satisfy the factor loading criteria in three (Greece, Hungary, Guatemala) out of four (Italy) of the countries tested. The same is true for this study, which also had a low factor loading (.30 for the father and .10 for the mother). As was the case with Italy, this study had a better factor loading when item 9 was loaded on the Emotional Warmth Scale, which meant that its original purpose was lost. Some studies (Li et al., 2012; Arrindell et al., 2005) removed item 9, in accordance with the original findings of Arrindell et al. (2001) and do not state any other reason for doing so. Other studies found that item 9 cross-loaded on emotional warmth (Yangzong et al., 2017). This therefore raises a point about why participants should be asked question 9 when this question is not

included in the 23-item scale scoring for overprotection, and most studies do not include item 9 in their measure at all?

Item 17, 'I was allowed to go where I liked without my parents caring too much', is the only item in the measure that is reverse scored. In this study, as well as the study by Yangzong et al. (2017), item 17 scored low in terms of factor loading (<0.2). Tibetan children formed the population group used in Yangzong et al.'s (2017) study, and they thought that there was an unclear or unspecified cultural reason why item 17 scored low for factor loading. In a study by Arrindell et al. (2005) of a Venezuelan adult population group, item 17 was also loaded on the Protection components but did not attain the lower bound of .40. Arrindell et al. (2005) suggest that this may be a quirk of the sampling as, in the same study, item 17 scored high in the case of an Australian and a Spanish population. However, item 17 also scored low among a Chinese adolescent population (Li et al., 2012) and was unable to attain the lower bound for the father (0.37) and a score of only slightly higher for the mother (0.42). The reverse scored item therefore appears to have lower loadings than other items on the protection factor. A possible explanation for the low loadings on the reverse scored item 17 might be that the numerical scoring process transforms the original responses to an opposite keyed item. There is little empirical evidence to suggest why the negative items need to be reverse-scored or how reverse-scored items affect the CFA results (Chen, 2017).

In this study, the decision was made to retain the items with missing data. It was especially important to include data for those who did not answer the question relating to siblings. An individual who is an only child with no siblings will not answer question 15 and will be deleted due to missing data. Consequently, participants who are representative of the population as a

whole would be excluded. If item 15 is retained, scholars need to address the problem of missing data. However, it is unclear from all the studies that have examined the s-EMBU what the authors do with regard to the missing data (case deletion, listwise deletion, pairwise deletion). This is unsurprising, according to Jackson et al. (2009), who found that 86.1% did not report which system had or had not been used to delete data. Li et al. (2012) deleted item 15 because it was considered unsuitable for the sample of Chinese 'only children' due to China's one-child-only policy. Although data was missing in relation to this item, which was subsequently filled through regression imputation, item 15 did not influence the other loadings, regardless of whether it was included or excluded.

Another point to note is that the translation of the original EMBU from Swedish into other languages may influence the results. For example, the Tibetan scale was translated from English rather than the original Swedish version. The effect of cultural differences may also mean that responses differ due to the wording of questionnaire items and how respondents interpret them. In the paper questionnaire used in this study, it is worth noting that respondents made comments about or corrections to the wording of some of the questions in the s-EMBU. This may be due to the way that the questions were interpreted when translated from Swedish to English. If the impact of translation on the item is not considered and the item is deleted, it may change the results and affect the conclusion inferred from them. The reason why item 17 was not deleted from the scale in this study was solely due to low factor loadings and to improve the 'goodness-of-fit'.

3.4.4 Validity of retrospective memories of parenting

The main criticism of the child-rearing theory is that people's memories of their upbringing and their parents can be notoriously faulty and, therefore, data collected based on memories should be meticulously and cautiously interpreted, especially given that many individuals have been away from their parent(s)' influence for many years (Muris et al., 1998). Kihlstrom (1994) states that memory should be seen as a reconstructive process, whereby a person's internal representation of the world reflects the external world, rather than a veridical process. Halverson (1988) points out that memories of certain events are often distorted, and parents and children report more positive past experiences than actually occurred. Rapee (1997) suggests that constructive and retrospective biases may play an influential role in recollections of childrearing. Yet, despite this, previous recollections of parenting styles have remained stable even when reassessed after a 20-year period (Murphy et al., 2010; Wilhelm et al., 2005). McCrae and Costa's (1988) analysis found consistent agreement between siblings' descriptions of their parents. However, Hardt and Rutter (2004) report that, although there is strong agreement between siblings in regard to their early memories of childhood, they may be misleading due to the corroboration of retrospective recall rather than discrete memories. Gilbert et al. (2003) point out that the relationship between a parent's behaviour and the experiences of the child is complex. These are important points to consider regarding the s-EMBU, when it is used in the subsequent chapters of this study.

3.4.5 Conclusion Regarding the s-EMBU

In conclusion, the present study empirically supports the s-EMBU as a reliable and valid measure for the retrospective assessment of parental rearing behaviour in a UK population. The s-EMBU is a relatively short measure that is easy to use. Furthermore, the results both

theoretically and statistically support the original 3-factor model with the subscales of Rejection, Emotional Warmth and Overprotection, for use in measuring retrospective parental rearing styles for both the mother and the father. It should be noted, however, that a couple of theoretically similar items were collated to improve the fit of the model.

Part Two

3.5 Compassionate Engagement and Action Scale Overview (CEAS)

This section evaluates the psychometric properties of a scale measuring compassion. As in the case of the s-EMBU discussed previously, a CFA is conducted, and the orientations of the CEAS (compassion for others, from others and for self) are explored (Gilbert et al., 2017). The purpose of the CFA is to examine the validity of the measure in a general population sample, in order to determine: 1) whether the data fit the model; and 2) to assess the internal reliability of the scale using the Cronbach's alpha value for each subscale. This evaluation is important for the following chapters, where the CEAS measure is used as an outcome variable in the mediation model.

3.5.1 The Compassionate Engagement and Action Scales (CEAS)

The CEAS measures three aspects of compassion: compassion for others; compassion received from others; and self-compassion, with high scores indicating greater levels of compassion. The first scale measures self-compassion, that is, the degree to which people can be compassionate to themselves. The second scale measures the degree to which individuals have an interest in being compassionate to others. The third scale provides an indication of the degree to which we feel that those who are important in our lives can be compassionate to our distress. Within each of the three scales, eight questions (engagement orientation) are defined by a

person's ability to be motivated to engage with feelings or things that may be difficult rather than avoiding or suppressing them. The five questions pertaining to the action orientations focus on the ability to be aware of the pain, learn to make sense of it, and take positive and helpful action.

3.6 Method for the CEAS measure

3.6.1 *Study Design*

Due to the CEAS measure being developed after the first survey was conducted online, not all the data used in the s-EMBU CFA were included. Cross-sectional data obtained from an online survey (n=87) and a paper survey (n=89) between September 2017 and August 2018 were used for this CFA (n=176).

3.6.2 *Sample Size*

Despite its flexibility, structural equation modelling specifies a number of assumptions that should be met to ensure that the results are trustworthy. As previously discussed in relation to the s-EMBU CFA, in order to establish an adequate sample size to run a CFA, between 200 and 300 participants were needed. However, recommendations from simulation studies by Anderson and Gerbing (1984) suggested that 100 would be considered the minimum acceptable sample size because only 5% or less of models are unable to sufficiently converge at this number, which is a much higher percentage than for sample sizes of 50. Anderson and Gerbing (1984) also found that sample sizes of 150 were usually sufficient for models with three or more indicators per factor. However, there are a number of issues to consider when trying to ensure that a sample size is adequate, and therefore, these numbers should not be taken as an

exact and definitive ‘rule’. Thus, the aim was to obtain over 100 participants’ responses to the CEAS measure so as to yield stable factor results.

3.6.3 Participants

All the participants in this study were over 18 years of age, proficient in English and consented to the use of their data. The participants were recruited from a combination of online questionnaires (n=87) and formatted paper questionnaires (n=89), to give a total of 176. As was the case with the s-EMBU CFA, those participants who did not finish the online version of the survey were removed, and presumed consent was withdrawn. Out of all the paper surveys, all the participants checked the consent box, and most completed all the measures.

Of the 176 respondents, 5 did not state their country of residence, and a further 23 who completed the online survey were not from the United Kingdom, so this left a total of 59 respondents from the United Kingdom. Meanwhile, 89 respondents completed and returned the paper surveys, selecting the United Kingdom as their country of residence. The total number of participants for the CFA was therefore 148.

3.6.4 Measuring Instruments (CEAS)

The CEAS measures three orientations of compassion (see Appendix C). For each of the three CEAS engagement subscales, consisting of eight questions, questions 3 and 8 are reverse scored items, and with regard to the five questions in the three action subscales, question 3 is reverse scored. None of the reverse scores are included in the scoring. The questions are scored on a 10-point Likert scale (from 1=never to 10=always). The Cronbach’s alpha values from the original study (Gilbert et al., 2017) were used to measure compassion for others: engagement

$\alpha=.90$ and action $\alpha=.94$; and compassion from others: engagement $\alpha=.89$ and action $\alpha=.91$. Engagement with self-compassion was divided into two subscales: sensitivity to suffering $\alpha=.77$ and with suffering $\alpha=.72$; and action $\alpha=.90$ (Gilbert et al., 2017). The measure was developed using a sample of college and university students from three different countries: the United Kingdom (n=288), the United States (n=343), and Portugal (n=418).

3.6.5 Procedures

The participants were recruited in the same way as for the s-EMBU CFA (see section 3.2.5).

3.6.6. Analysis and Data Cleaning

The data were analysed and cleaned as previously described in relation to the s-EMBU CFA (see sections 3.2.6 and 3.2.7 retrospectively). None of the reverse items were included in the analysis, as instructed by Gilbert et al. (2017).

3.6.7 Missing data

Of the 148 respondents, 2 who completed the paper survey did not fill in the CEAS measure or did not answer the majority of the CEAS questions, so their data would not be useful in the analysis. As in the previous study, the online surveys contained prompts if questions were missed, and no participants left any questions unanswered. The total number of respondents for the CEAS CFA was 146. Of the 146, 2 respondents did not state their marital status or ethnicity, and an additional 2 respondents chose not to state their gender. The most frequently omitted demographic information was the country in which the respondents currently lived (total n=23). Seven respondents did not provide any demographic information. After cleaning the data, any missing data in the survey were replaced with the discrete value of '999'.

3.6.8 Confirmatory Factor Analysis

A CFA was performed as previously described, using AMOS 25.0.0 statistical package (Arbuckle, 1999) to see how well the data fitted the model. A maximum likelihood method was used to estimate the parameters of the confirmatory factor analysis, as previously described and discussed in section 3.2.9. To assess the factor structure of the CEAS, an analysis was conducted separately on all three scales (compassion for others, compassion from others, and compassion for self). Only 30 of the 39 items in the CEAS were calculated, and the 9 reverse items were not included, as instructed by Gilbert et al. (2017). Five models were calculated in order to identify which model was the best fit for the data used in this study. Models 1 to 3 (Fig. 3.5 - 3.7) are two-factor models (engagement and action) for each of the three orientations of compassion (for self, from others, for others). Model 4 (Fig. 3.8) is a six-factor model: factor 1 is compassion for self (engagement); factor 2 is compassion for self (action); factor 3 is compassion for others (engagement); factor 4 is compassion for others (action); factor 5 is compassion from others (engagement); and factor 6 is compassion from others (action). Model 5 (Fig. 3.9) is a 3-factor model designed to measure three orientations of compassion.

To assess the fit of the CFA model, it is suggested that the same measures described in Chapter Three, regarding the s-EMBU CFA, should be used: the Root Mean Square Error of Approximation (RMSEA); the Comparative Fit Index (CFI); and the Tucker-Lewis Index (TLI). The cut-off points for each of the measures are as follows: a good fit for the RMSEA is <0.05 and an acceptable fit is <0.06 ; an acceptable fit for the CFI is >0.90 and a good fit is >0.95 ; and in the case of the TLI > 0.90 is an acceptable fit and >0.95 is a good fit (Hu et al., 1999). In the case of the ECVI, the smaller the number the better the fit (Schreiber et al., 2006). As was the case for the CFA used in Chapter Three, the usual conventions for path diagrams

were followed: Latent variables (or factors) were represented by circles; the observed scores (or items) were represented by boxes, and the arrows between these represented correlations.

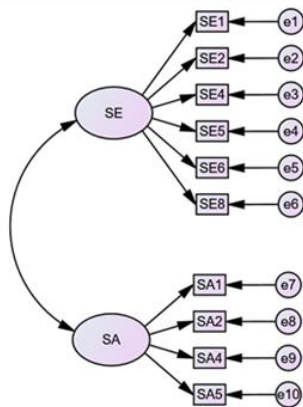


Figure 3.5: Model 1: A 2-factor model of compassion for self (Engagement & Action).

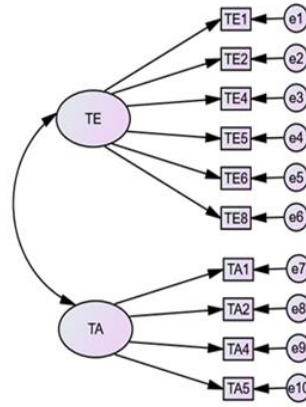


Figure 3.6: Model 2: A 2-factor model of compassion for others (Engagement & Action).

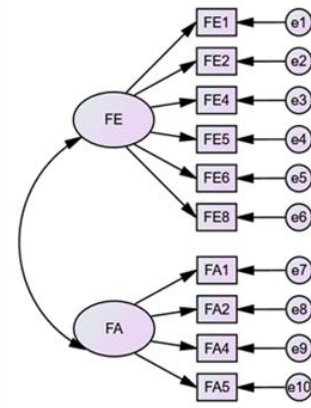


Figure 3.7: Model 3: A 2-factor model of compassion from others (Engagement & Action).

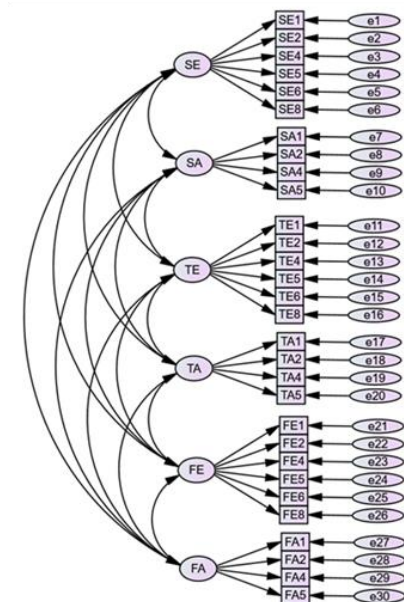


Figure 3.8: Model 4: A 6-factor model of compassion: compassion for self (engagement); compassion for self (action); compassion for others (engagement); compassion for others (action); compassion from others (engagement); compassion from others (action).

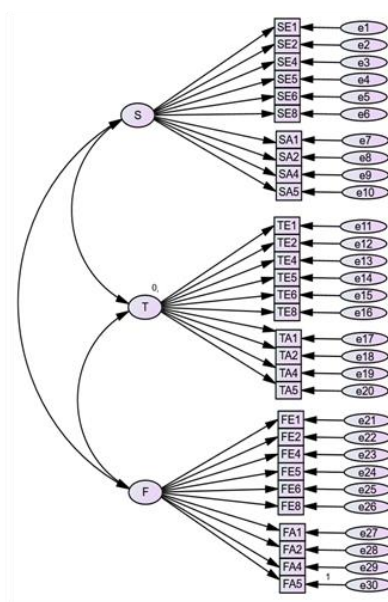


Figure 3.9: Model 5: 3-factor model of compassion for self; compassion for others; compassion from others.

3.6.9 Internal Reliability

Higher Cronbach's Alpha values indicate a better internal consistency of the items within the scale. As previously stated in section 3.2.10, guidelines suggest that 0 to .69 is poor, .70 to .79 is adequate, .80 to .89 is good and .90 to .99 is regarded as excellent (Kline, 1999). However, this is only an inference, and if the value suggested in the guidelines is not met, it does not invalidate a test (Clark & Watson, 1995; 2019). In Gilbert et al.'s study of the CEAS (2017), the UK participants' Cronbach alpha scores ranged between .89 and .94. When all three analyses were considered (UK, US and Portuguese), the Cronbach Alpha scores ranged between $\alpha = .67$ (compassion for others – Engagement (sensitivity)) and $\alpha = .94$ (compassion from others – Action). The Cronbach's alpha value of compassion for others – Engagement (all 6 questions) was not reported for all three countries combined. However, in the case of the UK cohort, the Cronbach's Alpha value for Engagement (all 6 questions) was reported and found to be $\alpha = .89$. This demonstrates that the scales used for measuring compassion for self, for others and from others are reliable and have good psychometric properties (Gilbert et al., 2015).

3.6.10 Ethical Considerations

Participants for the study were only recruited from an adult community sample; therefore, obtaining ethical approval from The University of Essex Ethics Committee was sufficient before conducting the study. Informed consent was gained from each participant at the beginning of the survey before proceeding to the pages containing the questions, regardless of whether they were completing the online survey or the paper survey. The ethical considerations were the same as previously stated in section 3.2.11 of this chapter.

3.7 Results for the CEAS measure

3.7.1 Sample Size

For this study, a sample size of 146 did not meet the minimum requirement proposed by Tabachnick and Fidell (2013) but it was considered a sufficient sample size according to Anderson and Gerbing (1984) (n=100). To reiterate, these numbers are for guidance only and should not be taken as exact and definitive. Therefore, even though the sample size was smaller than ideal, it was large enough to produce meaningful results.

3.7.2 Demographics

Of the individuals who participated (see Table 3.5), the mean age was 43.07 years (SD=19.59), with ages ranging between 18 and 81. 95.2% (n=139) of the participants responded to the questions about age, qualifications and occupation. Meanwhile, 93.8% (n=137) answered the questions about marital status, ethnicity and gender. The least answered demographic question was the one relating to the country in which respondents currently resided, with a response rate of 84.9% (n=124).

Table 3.5 Participant Demographics for the Combined Datasets.

Variable	N	Percentage
Age Groups		
	N	
Young Adult (18-35)	60	41.1
Middle Age (36-55)	40	27.4
Older Adulthood (56+)	39	26.7
Missing	7	4.8
TOTAL	146	100.0
Gender		
Male	45	30.8
Female	92	63.0
Prefer not to say	2	1.4
Missing	7	4.8
Total	146	100.0
Marital Status		
Single/Never married	52	35.6

Married	54	37.0
Living with a partner	15	10.3
Separated/Divorced	10	6.8
Widowed	6	4.1
Missing Data	9	6.2
Total	213	100.0
Ethnic Group		
White British	105	71.9
White Irish	4	2.7
Other White Background	15	10.3
Other Black Background	1	.7
White & Black African	1	.7
White & Black Caribbean	2	1.4
White Asian	1	.7
Other Mixed Background	1	.7
Indian	1	.7
Other Asian Background	3	2.1
Other Ethnicity	3	2.1
Missing Data	9	6.2
Total	146	100.0
Country		
United Kingdom	108	74.0
United States of America	4	2.7
France	3	2.1
Germany	2	1.4
The Netherlands	2	1.4
Finland	1	.7
Australia	1	.7
New Zealand	1	.7
South Africa	1	.7
Sweden	1	.7
Missing	22	15.1
Total	146	100.0
Education		
Degree/Higher Degree	67	45.9
Higher Education Qualification	12	8.2
A level or Equivalent	26	17.8
ONC/BTEC or equivalent	5	3.4
GCSE or equivalent (at 16 years)	16	11.0
No formal qualifications	8	5.5
Other	5	3.4
Missing Data	7	4.8
Total	146	100.0
Occupation		
Employer or manager	10	6.8
Professional worker	31	21.2
Non-manual worker	5	3.4
Skilled/Semi-skilled manual worker	4	2.7

Unskilled manual worker	1	.7
Self-employed	16	11.0
Unemployed	7	4.8
Homemaker/Housewife	4	2.7
Student	36	24.7
Other	25	17.1
Missing Data	7	4.8
Total	146	100.0

Of the 146 participants, 7 had missing data in relation to their age. Meanwhile, 137 participants stated their gender, with just 2 participants preferring not to specify and there were 7 who had missing data. Of these, 92 (63%) were female and 45 (30.8%) were male. Of the 146 participants, a higher proportion were married (n=54, 37%), and only 4.2% were missing data in the marital status group. With regard to ethnicity and country of residence, most were white British (n=105, 71.9%) and from the United Kingdom (n=108, 74%). There were more students (n=36, 24.7%) among the occupation group and most of these had degrees or higher degrees (n=67, 45.9%).

3.7.3 Preliminary Analysis of Data

To ensure that the data obtained for each item was suitable for factor analysis, all the data were plotted using box plots and histograms, and the outliers were checked against the original data for any data entry errors. None of the outliers fell outside the expected parameters of the measurement scores, and none had been identified with an asterisk as extreme outliers by the SPSS software. The Kaiser-Meyer-Olkin (KMO) value, which is a measure of sampling adequacy, showed that the sampling could be deemed adequate or 'meritorious' (KMO= .876) and indicated that the dataset was suited to factor analysis (Kaiser & Rice, 1974). The MSA (measure of sampling adequacy) for the individual variables produced values of between .771 and .945. A correlation matrix was constructed for all the items belonging to the three

orientations of the CEAS and there were found to be no correlation coefficients greater than .90, indicating that multi-collinearity was not an issue.

3.7.4 Confirmatory factor analysis (CFA)

The five models were analysed, and Models 1 to 3 were two-factor models of the three dimensions of compassion (for self, for others and from others). In Figure 3.5, Model 1, the two-factor self-compassion model is shown: divided into Engagement containing 6 items (SE1, SE2, SE4, SE5, SE6 and SE8), and Action containing 4 items (SA1, SA2, SA4 and SA5). The model had standardised factor loadings of between .50 and .91 with the exception of question 4 (SE4), 'I am emotionally moved by my distressed feelings or situations', which had a very low factor loading at .22.

Model 2 (see figure 3.6), the two-factor model of compassion for others, was divided into two subscales: one for Engagement containing 6 items (TE1, TE2, TE4, TE5, TE6 and TE8) and the other for Action containing 4 items (TA1, TA2, TA4, TA5). All but one of the factor loadings for this model were greater than .40 and between .49 and .95. Only Question 5 (TE5), 'I tolerate the various feelings that are part of other people's distress', on the engagement scale, had a borderline factor loading of .39. which falls just short of the guidelines for making it a factor loading high enough to include in the analysis. An acceptable factor loading cut-off point of .30 indicates medium loading (Brown, 2015). The third model (Model 3; see Figure 3.7) was a two-factor model measuring 'Compassion from Others', containing two subscales, one factor for Engagement (FE1, FE2, FE4, FE5, FE6 and FE8) and the second for Action (FA1, FA2, FA4, FA5, FA6 and FA8) This model had factor loadings of greater than .40 and between .65 and .94.

Figure 3.8 shows that Model four is a six-factor model comprised of the following: Compassion for Self – Engagement (SE1, SE2, SE4, SE5, SE6, SE8); Compassion for Self - Action (SE1, SE5, SE6, SE8); Compassion for Others – Engagement, containing 6 items (TE1, TE2, TE4, TE5, TE6, TE8); Compassion for Others – Action, containing 4 items (TA1, TA2, TA4, TA5); Compassion from Others with one factor for Engagement (FE1, FE2, FE4, FE5, FE6, FE8); and Compassion from Others with one factor for Action (FE1, FE2, FE4, FE5). With the exception of two factor loadings (.32 & .39), all the other factor loadings for this model were greater than .40 and between .46 and .95. The two weak loading items were the same items previously mentioned in reference to the models that had low factor loading scores. Compassion for Self, with the engagement subscale, question 4 (SE4) ‘I am emotionally moved by my distressed feelings or situations’ had a factor loading of .32 in this model; and Compassion for Others, with the engagement subscale, Question 5 (TE5), ‘I tolerate the various feelings that are part of other people’s distress’, had a factor loading of .39 in this model.

Model 5 (see Figure 3.9) is a three-factor model measuring the three orientations of compassion: Compassion for Self (SE1, SE2, SE4, SE5, SE6, SE8, SA1, SA2, SA4, SA5); Compassion for Others (TE1, TE2, TE4, TE5, TE6, TE8, TA1, TA2, TA4, TA5); and Compassion from Others (FE1, FE2, FE4, FE5, FE6, FE8, FA1, FA2, FA4, FA5, FA6, FA8). In this model, all but one of the factor loadings was greater than .40 and between .41 and .93. Compassion for Self, engagement question 4 (SE4) had a very low factor loading of .12.

Rules of thumb suggested by Zygmunt and Smith (2014) recommend that questions with factor loading values of below .40 should not be included. With regard to the questions that scored lower than .40 (Model 1: SE4; Model 2: TE5; Model 4: SE4, TE5; Model 5: SE4), the ‘goodness-of-fit’ measure was used to inform further considerations about item inclusion.

3.7.5 Additional factor models.

With regard to the compassion for self model, Gilbert et al. (2017) suggested that the engagement items could be divided into a further two dimensions: one for Engagement with two variables: sensitivity to suffering (SE2, SE4) and engagement with suffering (SE1, SE5, SE6, SE8); four items for actions (SA1, SA2, SA4, SA5). However, this model would have too many dimensions to explore for the purpose of this study and, therefore, it is not one of the main models explored in this chapter.

3.7.6 Goodness-of-fit

Several ‘goodness-of-fit’ indicators have been discussed earlier in this chapter (section 3.2.9). Initially, none of the 5 models met the criteria for all the fit indicators. Models 2 to 5 met the criteria for the normed Chi-square value, with a value of between 2 and 5 indicating a good fit (Tabachnick & Fidell, 2007). The value obtained for Model 1 fell outside of this range ($\chi^2/df=5.253$). The criteria for the CFI were met for Models 2 and 3, but only Model 2 met the criteria for the TLI. None of the models met the criteria for the RMSEA. Because the models did not meet the criteria for an adequate fit, each model was re-specified, excluding items with low factor loadings, and re-estimated with additional covaried error terms, which improved each of the models.

To improve the ‘goodness-of-fit’, an exploratory stance was adopted by considering the modification indices. However, post-hoc modification of the models was kept to a minimum. Table 3.6, below, shows the improvement in model fitness to an acceptable level in relation to the ‘rule of thumb’ cut-off criteria. In the case of Model 1, SE4 was removed from the engagement scale, due to having a poor loading factor (.22), to see whether this caused the factor loading and fit to improve. Removing item SE4 weakened the factor loading, and the

‘goodness-of-fit’ did not improve sufficiently to justify removing the item and re-specifying the model. Therefore, SE4 was retained in the analysis. However, Model 1 did not meet any of the ‘rule of thumb’ cut-off criteria. Three pairs of covaried error terms were successfully used to improve the model’s fit: SE1 – SE5, SE2 - SE4 and SA4 – SA5.

Table 3.6: Goodness-of-Fit Indexes for the Structural Models of the CEAS

MODEL	χ^2	df	(χ^2 / df)	TLI	CFI	ECVI	RMSEA A	90% CI for RMSEA	
								Low	High
Model 1: SC	178.609	34 ($p=.000$)	5.253	.749	.810	1.659	.171	.147	.196
Model 1: SC (covaried)	94.482	30 ($p=.000$)	3.149	.873	.915	1.134	.122	.095	.150
Model 2: FOR	107.264	34 ($p=.000$)	3.155	.910	.932	1.167	.122	.096	.148
Model 2: (covaried)	71.530	31 ($p=.000$)	2.307	.945	.962	.962	.095	.066	.124
Model 3: FRO	136.942	34 ($p=.000$)	4.028	.884	.912	1.372	.145	.120	.170
Model 3: (covaried)	77.180	31 ($p=.000$)	2.490	.943	.961	1.001	.101	.073	.103
Model 4 : 6 FA	933.999	390 ($p=.000$)	2.395	.819	.837	7.890	.098	.090	.106
Model 4: 6 FA (covaried)	820.149	385 ($p=.000$)	2.130	.853	.870	7.173	.088	.080	.097
Model 5: 3 FA	1134.068	402 ($p=.000$)	2.821	.763	.781	9.104	.112	.104	.120
Model 5: 3 FA (covaried)	870.084	396 ($p=.000$)		.844	.858	7.366	.091	.083	.099

(χ^2) Degrees of freedom (df) Tucker–Lewis index (TLI) comparative fit index (CFI) expected cross-validation index (ECVI) root mean square error of approximation (RMSEA). All values are significant at $p < .001$. Self compassion (SC), Compassion for others (FOR), Compassion from others (FRO) Factor (FA)

After modification, the fit of model 1 was improved by reducing the ECVI and the RMSEA, even though the lowest threshold for the RMSEA was still above the cut-off criteria. The normed Chi-square value fell within the 2 to 5 value range deemed appropriate for a good fit, and the CFI met the minimum cut-off criteria. The value for the TLI (.873) fell slightly short of the .90 cut-off point for an adequate fit; however, the model fit showed some improvement.

In the case of Model 2, item TE5 was borderline (.39) in terms of meeting the minimum criteria of .40, so this item was retained in order to keep the model in its original format. Three pairs

of covaried error terms improved the fit of the model: TE1 – TE4, TE5 – TE8, and TA1 – TA4. All the fit indices for this model met the specified criteria, and although the RMSEA was greater than 0.08, its lowest threshold was .066. With regard to Model 3, all the items had good factor loadings. Three pairs of covaried error terms improved the fit of the model (see Table 3.6): FE4 – FE6, FE5 – FE8 and FA4 – FA5. All the fit indices improved, the ECVI lowered, and the RMSEA was 101 with a low threshold of .073. Model 4 had the lowest RMSEA of all the models. In the case of models 4 and 5, post hoc modifications improved the model fit but not to the degree necessary for meeting the indices criteria. Model 4 had five covaried pairs, and Model 5 had six covaried pairs that improved the model fit, but not enough to meet the criteria for which the other models were shown to have a better fit.

In summary, the covaried models 1, 2 and 3 had good psychometric properties. After reviewing the CFA fit, it can be concluded that each of the scales used to measure compassion for self, compassion for others, and compassion from others can be interpreted as a single factor or further divided into the subscales of engagement and action. The modifications made in relation to the theoretical and practical plausibility of the preferred models (Models 1-3) are explored in the discussion session of this chapter.

3.7.7 Reliability of the CEAS

Alpha coefficients with a value above .7 are considered good. The internal consistency reliability (Cronbach's Alpha) was calculated and reported for each of the subscales. For this dataset, as shown in Table 3.6 below, all the Cronbach alpha scores were over .7 and therefore showed a very good level of internal reliability.

Table 3.7. Reliability of the Compassion Subscales

Item No.	Number of Items	Cronbach's Alpha
Compassion for self - Engagement	6	.73
Compassion for self - Action	4	.90
Compassion for others - Engagement	6	.83
Compassion for others - Action	4	.93
Compassion from others - Engagement	6	.89
Compassion from others- Action	4	.93

3.8 Discussion for the CEAS measure

3.8.1 Chapter Aims

As previously discussed at the beginning of Part Two of this chapter, the main aims of running the CFA for the CEAS were to determine whether the proposed model fits the data and to measure the internal reliability of the scale for use in a UK community sample. This was important because it is a relatively new measure that assesses three orientations of compassion, and the CEAS is used in the studies discussed in subsequent chapters.

3.8.2. Goodness-of-Fit

The CFA Models 1 to 3 resulted in an acceptable to good fit for the three orientations of compassion. As previously discussed, there is no agreed number of 'goodness-of-fit' indices that need to be reported and it can therefore be challenging to determine the best index to use. Jackson et al. (2009) found that 'cherry-picking' 'goodness-of-fit' measures was not common practice, there are no specific indices for which scores need to be agreed on and met, or any set number of indices to be reported. Whilst the aim is to achieve a good model fit, the 'rule-of-thumb' for meeting the criteria should not be seen as definitive or having to be achieved at all

costs. Modifications should not only be practically plausible in order to increase or decrease the parameters but should also make theoretical sense (MacCallum et al, 1996).

Again, as previously mentioned earlier in this chapter, if an item does not strongly correlate in the preliminary analysis of the model, it is advisable to first consider why it does not behave as expected rather than just deleting a low-loading item. For example, it may be due to the wording of the item (Clark & Watson, 2019). For the most part, each of the paired error covaried items appears to be asking similar questions, with subtle differences in meaning. In the case of Model 1, SE2-SE4 and SA4-SA5 are very similar in meaning. SE2 and SE4 both relate to sensitivity to a person's internal feelings, while SA4 and SA5 are worded very similarly and relate to helpfulness to others. However, SE1 and SE5 both have ambiguous meanings relating to how a person deals with distress. In the case of Model 2, TE1 and TE4 have ambiguous meanings: TE1 uses the phrase, 'engage and work', which also appears in SE1, but relating to other people's distress rather than one's own. The pairs TE5-TE8 and TA1-TA4 have similar meanings and appear to be asking about similar things. Likewise, in Model 3, each of the covaried pairs is very similar in terms of what they are asking, with just a few subtle differences: FE4-FE6 ask about an individual's view of their experiences of another person's awareness of their distress; FE5-FE8 ask about an individual's view of people's acceptance of their distress; and FA4-FA5 seem very similar in that they both ask about occasions when an individual received positive support (or helpfulness) from others. Although the differences in the questions are subtle, they can nonetheless be informative, but a participant may give the same answers to questions or, conversely, may interpret the questions very differently from each other or differently from what is expected. Care should therefore be taken when drawing inferences from the results.

3.8.3. Validity of Compassion

A review of the literature found a limited number of measures of compassion. The most well-known measure of compassion is the Self-compassion scale (Neff, 2003b). However, although it is a robust measure of compassion, it only measures compassion for the self. The CEAS measures three orientations or flows of compassion: for self, for others and from others, thus including the capacity for giving and receiving compassion. Where compassion is impeded, the fears of compassion model can be used to assess people's fear of giving and receiving compassion.

Although Gilbert et al.'s (2017) measure is relatively new, it produced robust results for studies in three countries that showed good validity across different cultures and languages. However, the concept of compassion is complex, and people may differ in their understanding and definition of compassion. The two low-loading questions are illustrative of this point: SE4, 'I am emotionally moved by my distressed feelings or situations', and TE5, 'I tolerate the various feelings that are part of other people's distress'. A possible explanation for their low loadings could be that participants found the wording unclear and had different understandings of the questions. In addition, these two questions and indeed the majority of the 39 questions include the word 'distress' and focus specifically on distress. While distress clearly causes people to act and react, an individual might have many other motives for being genuinely compassionate, such as wanting to be liked (Catarino et al., 2014).

3.8.4 Conclusion for the CEAS

In conclusion, the present study empirically supports the use of the CEAS as a reliable and valid instrument for measuring the three dimensions of compassion in the general population. All three CEAS subscales had good internal consistency, and the results of this study support

the use of the models comprising three separate single-factor scales of compassion (compassion for self, compassion for others and compassion from others). This gives them a unique ability to offer insights into the orientations of compassion, which is not limited to understanding compassion for the self alone. The results support the use of the 3-factor model for each of the three orientations of compassion.

3.9 Summary

The two main aims of the chapter were to determine whether the proposed models fit the data and to assess the scale's internal reliability. It has been shown that both the CFA for the s-EMBU and the CEAS are measurements with good reliability and validity that can be used in a UK community sample for the constructs of interest. Thus, both measures are adequate and sufficiently accurate to use as variables in further analysis when examining the relationship between perceived parenting in childhood (s-EMBU) and (self)compassion (CEAS).

3.10 Limitations

This study has several limitations. Confirmatory factor analysis (CFA) was used to confirm whether the nature of the constructs or measures (s-EMBU and CEAS) are consistent with the theoretical understanding of what they intend to measure and, therefore, bridging the gap between the two. A CFA was conducted to examine the psychometric properties of both measures (s-EMBU and CEAS). This was chosen rather than other analyses, such as exploratory factor analysis (EFA). For a CFA, there was a clear theoretical expectation about the factor structure, whereas for EFA the structure of the data is not predefined and discovered through the analysis. The CFA was also used rather than item response theory (IRT) due to its flexibility and focus on the relationship within a system of variables rather than the test items themselves.

Secondly, there are implications from the assumption of normality not being met, such as small sample size, outliers and skewness, resulting in incorrect inferences being made from the data. Therefore, caution should be exercised when generalising these results due to the non-normal distribution of some of the data, which may affect the stability of the model. A solution for analysing non-normally distributed data in a CFA, an asymptotically distribution-free (ADF, Browne, 1984) method is recommended. However, the recommended minimum participant number needed for this method is a minimum of a 1000 (West et al., 1995). With this in mind, for future research, if the research does not meet the assumption of normality and has less than a 1000 participants, other methods that are utilised to reduce non-normal distribution should be explored. However, there is no consensus on recommended solutions for non-normality in CFA.

The s-EMBU measures perceived parenting in childhood, whilst the CEAS measures different orientations of compassion (for self, for others and from others). Though they are very distinct measures in what they are measuring, they do have similarities. The s-EMBU and CEAS utilised their respective CFA three-factor models, and both had Cronbach alpha scores, indicating good internal consistency. Yet, neither measure met the cutoff criteria for goodness of fit. Items within the measures could have been removed or changed to meet the criteria; however, this would result in the deconstruction of the measure. When looking at the bigger picture, the ultimate aim was to find the best-fit model that made theoretical sense (i.e., the three-factor model) and that additional variables are not added to the dependent variables taken further into the mediation analysis chapters.

Chapter Four

Self – Compassion

4.1 Introduction

The literature suggests that there is a correlation between perceived parenting in childhood and self-compassion. Bowlby (1988) explains that the effect a parent has on a child in the formative years of a child's life can last for a very long time - from cradle to grave, in fact - and hence it is unlikely to change much over a person's lifespan. However, some studies, including Pepping et al. (2015), suggest that there is a more complicated relationship between perceived parenting in childhood and self-compassion and that other factors mediate that effect. This chapter aims to explore specific factors that may play a mediating role.

4.1.1 Chapter Overview

This chapter examines the relationship between retrospective parenting received in childhood and the Self-Compassion Scale. It also investigates the mediatory effects of adult attachment (anxiety and avoidance) and social connectedness on the relationship between perceived parenting and self-compassion. The study has a cross-sectional research design and the process of data screening and results for a community sample using four psychometric questionnaires (s-EMBU; ECR-R; SCoN; SCS) is described, in order to address the study aims. Based on the results, there follows a discussion of the effect of the mediatory measures (adult attachment and social connectedness) on the relationship between parenting and self-compassion.

4.1.2 The Rationale for this study

The focus is to establish the relationship between perceived parenting in childhood and self-compassion and if adult attachment (anxiety and avoidance) and social connectedness are

possible underlying mechanism by which perceived parenting and self-compassion are associated. Hence an individual's perceived parenting may predict adult attachment or social connectedness which in turn predicts an individual's capacity for self-compassion.

The overall aim of this study is to investigate individual differences in self-compassion. Pepping et al. (2015) were the first to explore the role played by adult attachment in mediating the association between experiences of parenting in childhood and individual differences in self-compassion. They suggested that early childhood experiences and attachment could have an impact on the development of differences in individuals' levels of self-compassion. Their findings showed that in childhood, poor parenting predicted higher attachment anxiety (but not avoidance), which in turn predicted lower self-compassion. Their multiple mediation model used a global-level Self-Compassion Scale and predicted approximately 15% of the individual differences, or variance, in self-compassion. It is likely that a factor such as social connectedness may be linked to this process. Social connectedness could be a protective factor for those who perceive their parenting in childhood as poor. Therefore, social connectedness may have the potential to further explain the individual differences and variance in self-compassion. Consequently, it is worth exploring the relationship between parenting received in childhood and self-compassion when mediated by social connectedness. Therefore, including social connectedness and adult attachment as mediating factors may explain more of the variance in self-compassion.

Neff's (2003b) Self-Compassion Scale (SCS) has been the most widely used construct for measuring self-compassion. This study uses Neff's SCS to measure self-compassion in order to gain insight into the relationship between perceived parenting in childhood and compassion

when mediated by either adult attachment (anxiety and avoidance) or social connectedness, in order to explain the variance in self-compassion.

4.1.3 Research Aims, Objectives and Research Questions

This study investigates the relationship between perceived parenting received in childhood and self-compassion, which is measured using Neff's (2003b) Self-Compassion Scale. It also explores whether adult attachment (anxiety and avoidance) and social connectedness mediate this association. The following aims, objectives, and research questions, which relate to the aims set out at the end of Chapter Two, are explored in this chapter, focusing specifically on self-compassion.

4.1.3.1 Research Aims

Research aims of the study:

1. To explore the relationship between perceived parenting behaviour and self-compassion when mediated with adult attachment.
2. To explore the relationship between perceived parenting behaviour and self-compassion when mediated with social connectedness.
3. To explore the relationship between perceived parenting behaviour and self-compassion when mediated with adult attachment and social connectedness.

4.1.3.2 Research Objectives

Objectives of this research:

1. To determine whether there is a relationship between perceived parenting behaviour and self-compassion when mediated with adult attachment.

2. To determine whether there is a relationship between perceived parenting behaviour and self-compassion when mediated with social connectedness.
3. To determine whether there is a relationship between perceived parenting behaviour and self-compassion when mediated with adult attachment and social connectedness.

4.1.3.3 Research Questions

The study described in this chapter seeks to address the following research questions using a measure of self-compassion. :

1. Is compassion related to perceived paternal and maternal parenting behaviour?
2. Is adult attachment related to perceived paternal and maternal parenting behaviour?
3. Does adult attachment mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and attachment?
4. Is social connectedness related to perceived paternal and maternal parenting behaviour?
5. Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?
6. Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and adult attachment and social connectedness?

4.2 Method

4.2.1 Study Design

First, the correlation between perceived parenting behaviours and self-compassion is tested. Where there is a statistically significant correlation, the mediatory effect of adult attachment is tested. Next, the relationship between perceived parenting and self-compassion mediated by

social connectedness is tested. Finally, a serial mediation, comprising adult attachment and social connectedness, is tested to discover what indirect effect they have on the relationship between perceived parenting and self-compassion.

4.2.2 Participants

4.2.2.1 Participant Eligibility

This study utilised a cross-sectional design based on self-report scales and recruited from the general population. Both men and women over 18 years old with a good understanding of the English language were invited to participate in the study. However, those whose level of English was insufficient to understand the questionnaire were unlikely to choose to take part. Similarly, anyone younger than 18 at the start of the study was excluded. Due to the online nature of the study, participants were unlikely to be solely from the United Kingdom.

4.2.2.2 Sample Size

To establish a purposeful sample size that met the requirements of this study, a minimum number of participants was needed. Fritz and MacKinnon (2007) conducted a literature survey of 166 studies that tested for mediation, and most of them used a sample of between 101 and 150 participants. The median sample size for testing an indirect effect was 142.5 participants (115 – 285). Given the indirect median sample size range of 115 – 285 participants, the aim was to recruit at least 115 participants for this study.

4.2.2.3 Participant Recruitment

Participants were recruited through advertisements on websites, internet forums, and social media networks (e.g., Facebook, Twitter). A snowball sampling method was used to reach a

large number of participants. The questionnaires were completed via an online survey hosted by Qualtrics.

4.3 Measures

In this section, each measure used is described in turn. All the measures included in the study were self-reported. Copies of the measures can be found in the appendices.

4.3.1. Demographic Information (see Appendix D)

Demographic information was gathered by asking participants to answer questions about their age, gender, marital status, education level, current employment, and ethnicity. These demographic characteristics are commonly used in other surveys and facilitate comparisons with raw samples from other research studies. The information gathered can help to better understand and interpret the results and ascertain to what extent the findings can be generalised.

4.3.2 Perceived parenting received in childhood: Short Form Egna-Minnen Beträffande Uppfostran - s-EMBU (Arrindall et al. 1999) (see Appendix A)

As described in Chapter Three, the s-EMBU measures adults' perceptions of their parents and upbringing. It contains 23 items which are divided into three scales: Emotional Warmth (6 items), Rejection (7 items), and Protection (9 items). Question 9 was omitted from the subscale because it failed to show consistently high loadings on the Swedish version of the Protection subscale relating to the mother (Arrindell et al., 1999). In Pepping et al.'s study (2015), the s-EMBU demonstrated high internal consistency for Emotional Warmth (.94), Rejection (.88) and Overprotection (.87). Gilbert (2003) used the s-EMBU in a UK student population; the Cronbach alpha values were as follows: Emotional Warmth (.80), Rejection (.90) and Overprotection (.78).

4.3.3 Attachment: Experiences in Close Relationships Scale (Revised)- ECR-R (Fraley et al., 2000) (see Appendix E)

The ECR-R is a 36-item measure of adult attachment which is divided into two attachment subscales: Anxiety and Avoidance. Both subscales contain 18 items. Participants are asked about how they generally experience relationships. The items are rated on a 7-point Likert scale from 1 to 7. Low scores on both subscales are indicative of secure attachment. The measure has excellent reliability; a meta-analysis reported the Cronbach's alpha coefficients to be near or above 0.90 (Ravitz et al., 2010) for both scales. It is widely used within the field of attachment research.

4.3.4 Social Connectedness: - The Social Connectedness Scale (Revised) (Lee, Draper & Lee, 2001) (see Appendix F)

The Revised Social Connectedness Scale measures the degree to which individuals perceive their connection to themselves and those around them. The revised version of the ECR contains 20 items (Lee et al, 2001). The items are rated on a 6-point Likert scale from 1 to 6. Higher scores indicate a stronger sense of connectedness. The internal reliability of this scale among a student population was $\alpha = .92$. The authors consider a mean score of 3.5 or greater (slightly agree to strongly agree) to indicate a tendency to feel more socially connected. Permission to use the measure was obtained from Dr Richard Lee, the author of the Social Connectedness Scale.

4.3.5. Self-Compassion: Self-Compassion Scale - SCS (Neff, 2003b) (see Appendix G)

The Self-Compassion Scale (SCS) (Neff, 2003b) consists of 26 questions and is used to assess self-compassion. It assesses subscales of self-compassion comprising self-kindness, common humanity and mindfulness; and subscales of self-critical judgement comprising self-

judgement, isolation and over-identification. For each question, participants are asked how they behave and have to rate their behaviour on a 5-point scale ranging from a scale of 1 (almost never) to 5 (almost always). These subscale scores can then be summed to reflect one higher-order factor, thus giving a total self-compassion score. The SCS has good internal reliability. The internal consistency for the 26-item SCS was .92 (Neff, 2003b). Retest reliability for the overall self-compassion score was .93. The Self-compassion Scale is widely used in the self-compassion literature. In this study, the overall self-compassion overall score is used.

4.4. Ethical Considerations

4.4.1 Informed Consent

The study only recruited from an adult community sample; therefore, it was sufficient to obtain ethical approval from The University of Essex Ethics Committee before commencing the study. The study was conducted with honesty and integrity in accordance with ethical requirements to ensure that participants' rights and dignity were protected. A participation information sheet was designed (see Appendix H) to provide all potential participants with details of the study, including information about what was involved in participating in the study, the eligibility criteria, the requirement to obtain their consent to participate, and their right to withdraw from the study if they wish. Informed consent was obtained from each participant at the beginning of the survey before proceeding to the pages containing the questions that comprised the online survey. The use of radio buttons allowed participants to indicate that they had read and understood the main aspects of the consent information, provide their agreement to participate, and were aware of their right to withdraw at any stage if they wish to do so. Participants were informed that it would not be possible to remove their responses once their data had been submitted due to the data being anonymised.

4.4.2. Confidentiality

A participant's email address was only retained if they wished to be informed of the study's results. This was kept separate from any personal data identifiable to that person. Participants were assured of anonymity and confidentiality when completing the questionnaire. It was explained to them that emails would be deleted immediately after dissemination of the study results.

4.4.3. Data access, storage, and security.

Participants were informed that the information would be anonymous, and no data identifiable to a particular individual other than an email address would be connected to the anonymised data in SPSS, which would be password-protected and encrypted. The email address would be used solely to send the study results to those participants who chose this option in the questionnaire.

4.4.4 Risk Management

The study involved asking participants questions about memories of and events in their childhood and how they feel about those memories. For some, this may have resulted in the recall of distressing events that happened in the past and how they felt about those events. Consequently, answering certain questions may have been difficult and upsetting for some. Participants were reminded that they could choose to discontinue their participation and withdraw from the study at any point without explanation. Anyone reporting distress was informed that they should contact their GP, health professionals or other appropriate organisations for advice and support. The debrief sheet (see Appendix J) included advice to participants on how and where to seek advice and information. They were encouraged to contact the researcher if they wanted to provide feedback.

4.5 Procedure

4.5.1 Participants

Before the commencement of the questionnaire, participants needed to provide their consent electronically. Participants were asked to confirm their eligibility and consent to participate (Appendix I). After they had completed the questions, participants were directed to a final page containing a list of organisations from which they could obtain further support and advice if participating in the survey had caused them any discomfort (Appendix J).

4.5.2 Data Collection

The data was collected online between June 2016 and February 2017 for a total of 150 participants. Once the participant had submitted their responses to the questionnaire, the data was downloaded into an SPSS program (SPSS for Windows, version 29.0) directly from Qualtrics to minimise the potential for error during manual input.

4.6 Data Analysis

Analysis of the cross-sectional data was conducted using SPSS v.29 and the Process macro for SPSS v4.2 using Models 4 and 6. Model 4 was a mediation model that used one mediator. Model 6 was a mediation model that allowed up to 4 mediators to be included in a serial operation (Hayes, 2017). One mediator was used to mediate adult attachment or social connectedness. A serial mediation model was used when there were two mediators (adult attachment and social connectedness). Mediator analysis was carried out to explain the relationship between the predictor variable (perceived parenting received in childhood) and the outcome variable (compassion), with the addition of the mediators(s) (adult attachment and social connectedness) (Hayes, 2017). As well as showing the direct effect of parenting on self-compassion, mediator analysis can also show the indirect effect of parenting and self-

compassion through adult attachment only, and the indirect effect of parenting on self-compassion through adult attachment and social connectedness in the serial mediation model.

Figure 4.1. shows the proposed model used for mediator analysis based on Model 6.

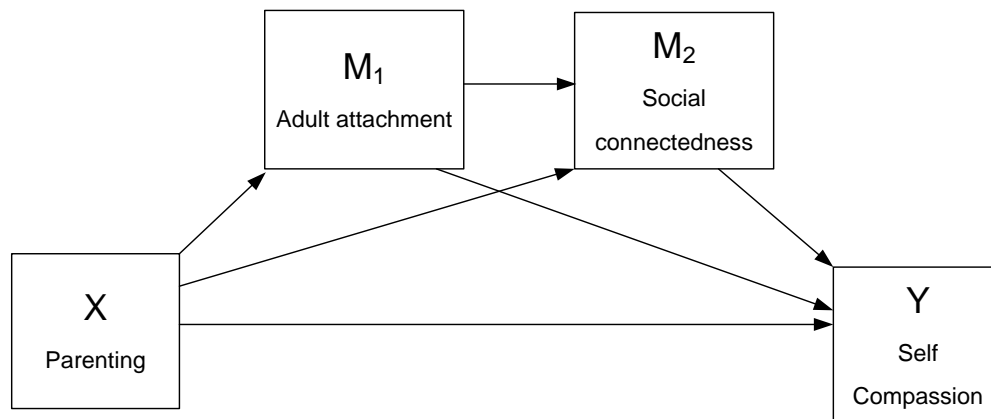


Figure 4.1. Conceptual Model: The relationship between parenting and self-compassion, mediated by adult attachment and social connectedness.

4.6.1 Research Question 1: Is self-compassion related to perceived maternal and paternal behaviour?

The decision was made to use correlational analysis to examine whether there were associations between self-compassion and perceptions of parental behaviour (rejection, overprotection and emotional warmth) in the case of fathers and mothers, which are analysed separately. This study examines the total self-compassion score for each participant. This is an aggregated single score and different aspects (or subscales) of self-compassion are not investigated.

4.6.2 Research Question 2: Is adult attachment related to perceived paternal and maternal behaviour?

Correlational analysis was selected to address this question, in order to investigate whether there were associations between adult attachment and perceived parental behaviour. To conduct these analyses, the scores on the subscales of adult attachment (attachment anxiety and

attachment avoidance) were explored with rejection, overprotection and emotional warmth from fathers and mothers, and assessed separately.

4.6.3 Research Question 3: Does attachment mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and attachment?

This research question was investigated in accordance with the most widely used method of assessing mediation, namely Baron and Kenny's (1986) three steps of regressions. In step 1, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) must predict self-compassion. In step 2, perceived parenting behaviour must predict adult attachment (attachment anxiety and avoidance). In step 3, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and adult attachment (attachment anxiety and avoidance) must predict self-compassion. The criteria for all three steps must be met in order to show that mediation has taken place. The investigation was conducted using correlation analyses, followed by a mediation analysis using Model 4 to determine whether adult attachment is the potential mediator.

4.6.4 Research Question 4: Is social connectedness related to perceived paternal and maternal behaviour?

Correlational analysis was again chosen as the most appropriate method for examining whether there were associations between social connectedness and perceived parental behaviour. To conduct these analyses, social connectedness was represented as a single score and explored with rejection, overprotection and emotional warmth from fathers and mothers, which were analysed separately.

4.6.5 Research Question 5: Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?

According to Baron and Kenny's (1986) three steps of regressions, in step 1, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) must predict self-compassion. In step 2, perceived parenting behaviour must predict social connectedness. In step 3, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and social connectedness must predict self-compassion. These factors are investigated using correlation analyses, followed by a mediation analysis using Model 4 to determine whether social connectedness is the potential mediator.

4.6.6 Research Question 6: Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and adult attachment and social connectedness?

Assuming that the criteria for the three steps of regressions have been met in the previous questions (4 and 5), a serial mediation analysis using Model 6 would then be conducted to determine whether adult attachment and social connectedness are potential mediators.

4.7 Results

4.7.1 Data Screening

All the variables were checked for errors in the data. The scores of all the variables fell within their expected minimum and maximum range. The frequencies were also checked for each variable, and all the items came within the scale and, therefore, no spurious data were found.

4.7.2 Missing Variables

Any missing data was given the code '999' to specify that it was missing. Of the total respondents (n=150), those who did not finish the questionnaires were presumed to have withdrawn consent for their data to be used (n=10). Those who consented but did not complete 50% of each measure were also excluded (n=9). After the data for 19 participants had been removed, a total of 131 participants remained.

In the case of the questionnaire's, missing data was minimised by the survey design, which was intended to prompt the participants if a question was missed. However, the questions representing the s-EMBU were an exception. For this part of the survey, participants could leave questions unanswered for either the father or mother, or if they did not have either of these as their primary caregivers in childhood.

An analysis of missing values was run to see if a particular question had not been answered. There was one question in the s-EMBU that was left unanswered more than any other, which related to a participant's siblings, namely 'Q15. I felt that my parents liked my brother(s) and/or sister(s) more than they liked me'. 8.4% of participants left this question unanswered for both the father and the mother. This was presumably because the participant did not have siblings and so was unable to answer it. Therefore, although a few items of data were missing, the participants' partial answers to questions relating to the s-EMBU were still included.

In regard to the Self-Compassion Scale (SCS), Experience of Close Relationships–Revised (ECR-R), and the Social Connectedness Scale (SCoN), no question was missing more than 1.5% of the data for any item. Due to the questionnaire design which included prompts for missing data, it was presumed that the participant had not intended to answer the question in

such cases. This may have been because some participants found certain questions on the scales hard to understand or respond to, or simply preferred not to answer.

4.7.3 Demographics

Demographic information about the participants is shown in Table 4.1. All the respondents (n=131) stated which country they reside in. The responses were as follows: United Kingdom (n=40), England (n=49), (Great) Britain (n=2), Wales (n=1), Ireland (n=2), Yorkshire (n=1), but these were all grouped under the same geographical area, i.e. the United Kingdom (n=95). All the respondents provided information about their age, ethnicity, education, occupation and marital status. The mean age of the participants was 35.95 years, with an age range of between 18 and 73 years, and they all participants answered this question. In relation to ethnicity, 67.2% of participants were white British (n=88) and 72.5% lived in the United Kingdom (n=95). With regard to education, the highest percentage of participants had a degree or higher degree: 47.3% (n=62), and in relation to their occupation, the highest percentage were students: 36.6% (n=48), followed by 32.1% (n=42) professional workers. Out of the 131 participants, the highest percentage were married (n=53; 40.3%). With regard to gender, there were more female participants (n=85; 64.9%), than male (n=27; 20.6%), while 19 participants (14.5%) had missing data due to a survey design error at the beginning of the survey.

Table 4.1 Participants' Demographics.

Variable	N	Percentage (%)
Mean Age (5)	N	
35.95	131	100
TOTAL	131	
Gender		
Male	27	20.6
Female	85	64.9
Missing	19	14.5
Total	131	100.0
Marital Status		

Single/Never married	49	37.4
Married	53	40.5
Living with a partner	22	16.8
Separated/Divorced	7	5.3
Widowed	-	-
Civil Partnership	-	-
Total	131	100.0

Ethnic Group

White British	88	67.2
White Irish	3	2.3
Other White Background	30	22.9
Black Caribbean	-	-
Black African	1	0.8
Other Black Background	-	-
White & Black African	-	-
White & Black Caribbean	-	-
White Asian	1	0.8
Other Mixed Background	2	1.5
Indian	-	-
Pakistani	-	-
Bangladeshi	-	-
Other Asian Background	1	0.8
Chinese	3	2.3
Other Ethnicity	1	0.8
Total	131	100.0

Country

United Kingdom	95	72.5
United States of America	9	6.9
Australia	6	4.6
Canada	3	2.3
Germany	5	3.8
The Netherlands	2	1.5
Norway	2	1.5
Denmark	2	1.5
Cyprus	1	.8
Malaysia	1	.8
Finland	1	.8
Czech Republic	1	.8
Mexico	1	.8
Poland	1	.8
Korea	1	.8
Total	131	100.0

Education

Degree/Higher Degree	62	47.3
Higher Education Qualification	20	15.3
A level or equivalent	25	19.1
ONC/BTEC or equivalent	8	6.1

GCSE or equivalent (at 16 years)	10	7.6
No formal qualifications	2	1.5
Other	4	3.1
Total	131	100.0
Occupation		
Employer or manager	7	5.3
Professional worker	42	32.1
Non-manual worker	2	1.5
Skilled/Semi-skilled manual worker	3	2.3
Unskilled manual worker	4	3.1
Self-employed	5	3.8
Unemployed	3	2.3
Homemaker/Housewife	10	7.6
Student	48	36.6
Other	7	5.3
Total	131	100.0

4.7.4 Outliers and Assumption of Normality

There is evidence from the data that some of the variables do not have a normal distribution. First, in the case of the histograms for the Self-Compassion Scale, all the bell curves for the total scores were symmetrical. Regarding the s-EMBU scale, paternal and maternal emotional warmth and maternal overprotection also produced symmetrical bell curves. The curves for paternal and maternal rejection were flattened and skewed to the left, at the bottom end of the scales. Paternal overprotection also produced a skewed bell curve to the left or lower end of the scale, but unlike the rejection subscale, it was not flattened. ECR-R attachment avoidance and particularly paternal and maternal rejection produced data that was clustered at the higher end of the scale. The bell curves for the anxiety and avoidance scales and total connectedness were symmetrical. However, the Social Connectedness Scale produced a cluster of data at the lower end of the scale.

All the outliers flagged by SPSS (version 29) were within the minimum and maximum range for the relevant scale and, therefore, considered not to strongly influence the skewness of the

data. There was little difference between the 5% trimmed mean and original mean for each variable; therefore, it was assumed that any scores at the more extreme end of the scale did not strongly influence the mean.

The assumption of normality needs to be met to ascertain whether a parametric test is reliable. Therefore, in order to determine whether the data met the assumption of a normal distribution, a z-score for skewness and Kurtosis was calculated. These values were expected to fall between -1.96 and +1.96 for a normal distribution. The z-value was obtained by dividing the skewness or Kurtosis skewness by its standard error. In addition, if the Shapiro-Wilks value is less than $p=.05$, this means it is significantly different from a normal distribution (Field, 2018, p. 249) (see Table 4.2).

Table 4.2: Results of Variables for Normal Distribution

	Mean (Std.E)	Standard Deviation	Skewness (z value)	Kurtosis (z value)	Shapiro- Wilks Sig.
TOTAL SCS	2.79	.705	.025 (.12)	-.592 (-1.41)	.478
Father Rejection	1.74	.759	1.202 (5.64)	.921 (2.18)	.000
Mother Rejection	1.79	.713	1.111 (5.24)	.796 (1.89)	.000
Father Emotional Warmth	2.54	.851	-.190 (-.89)	-1.058 (-2.50)	.000
Mother Emotional Warmth	2.73	.831	-.251 (-1.18)	-.982 (-2.33)	.000
Father Overprotection	2.03	.709	.673 (3.16)	-.142 (-.36)	.000
Mother Overprotection	2.34	.703	.163 (.77)	-.927 (-2.20)	.003
Attachment Anxiety	3.02	1.20	.068 (.32)	-1.156 (-2.75)	.000
Attachment Avoidance	3.41	1.07	.033 (.16)	-1.061 (-2.53)	.004
Social Connectedness	3.82	1.00	-.559 (-2.64)	.241 (.66)	.003

4.7.5 The Self-Compassion Scale Assumption of Normality

The total self-compassion score variable met the criteria for a normal distribution due to the Shapiro-Wilks test showing a non-significant, normal distribution. A visual inspection of the

histograms and Q-Q plots was conducted (see Appendix K). The data points in the Q-Q plot for the total self-compassion score did not deviate significantly from normal, so it met the criteria for a normal distribution.

4.7.6 The s-EMBU scale assumption of normality of the data

With regard to the subscales of the s-EMBU scale, paternal and maternal emotional warmth had z-values for skewness that fell within the normal range of ± 1.96 . Although the skewness for maternal emotional warmth was within the range for Kurtosis (z-value=-1.75), the Kurtosis value for paternal emotional warmth fell just outside the normal range (z-value=-2.16). Maternal overprotection was within the normal range for skewness, but paternal overprotection was found to be positively skewed. However, paternal overprotection was within the normal range for Kurtosis, but maternal overprotection fell outside the normal range for Kurtosis (z-value=-2.21). With regard to parental rejection, Kurtosis was shown to be within the normal range for both paternal and maternal scores. In terms of skewness, both the scores for paternal rejection (z-value= 4.82) and maternal rejection (z-value= 4.37) were extreme, positively skewed and not normally distributed.

The Shapiro-Wilks test for significance showed that all three parental behaviour scales were significantly non-normal, with significance levels of under $p=0.05$. Meanwhile, the histograms for the scales revealed that both maternal overprotection and paternal overprotection were positively skewed. The Q-Q plots for these variables indicated that there was a departure from the line, and the dots sagged away from the line, both above and below it, with father overprotection showing a further departure from the line at the higher end of the scale. In regard to parental emotional warmth for both the father and the mother, the histograms were skewed to the right, with father's emotional warmth being particularly heavy-tailed. The Q-Q plots for both were mainly on the line with the pattern of dots showing little departure from it. Because

more extreme scores were found on the histogram for parental rejection, this clearly demonstrates a positive skewness for both the paternal and maternal results. Again, the Q-Q plot showed a greater departure from the line at the higher end of the scale than the other variables (see Appendix L, Figures 1 & 2).

4.7.7 The ECR-R scale assumption of normality of the data

With regard to the ECR subscales of attachment anxiety and attachment avoidance, the skewness met the criteria for a normal distribution, but the Kurtosis values for both Attachment anxiety ($z\text{-value}=-2.38$) and attachment avoidance ($z\text{-value}=-2.05$) fell outside the suggested limits of ± 1.96 for departure from normality and both showed a negative skewness. The Shapiro-Wilks test for significance revealed that both scales were significantly non-normally distributed. The results of the Shapiro-Wilks test also showed that the data for attachment anxiety and attachment avoidance differed significantly from a normal distribution. (anxiety=.002 sig.; avoidant = .004 sig.). The graphs below show the data for attachment anxiety (see Appendix M) and avoidance, which follow a non-normal distribution. A visual inspection of the histograms confirmed that there was skewness and Kurtosis. With regard to the attachment anxiety Q-Q plot, it showed an s-shaped departure from the line, indicative of skewness, while the Q-Q plot for attachment avoidance showed a more inconsistent pattern along the line.

4.7.8 The Social Connectedness scale assumption of normality of the data

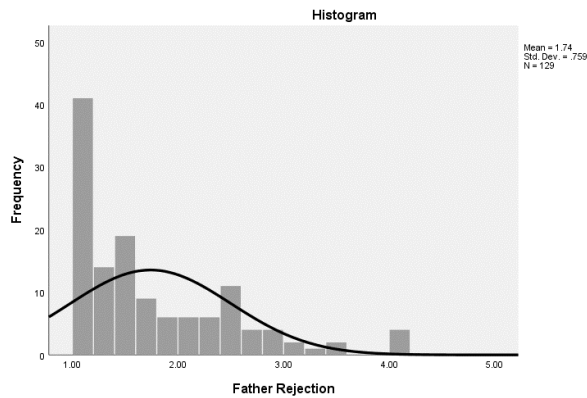
The Social Connectedness Scale was negatively skewed (Skewness, z value = -2.19), but the Kurtosis was within the normal distribution limits. The Shapiro-Wilks test showed that the data was not significantly non-normally distributed. However, the graphical evidence shows that

there is a heavy-tailed distribution and that the data are deviating both above and below the line, which indicates skewed rather than normally distributed data (see Appendix N).

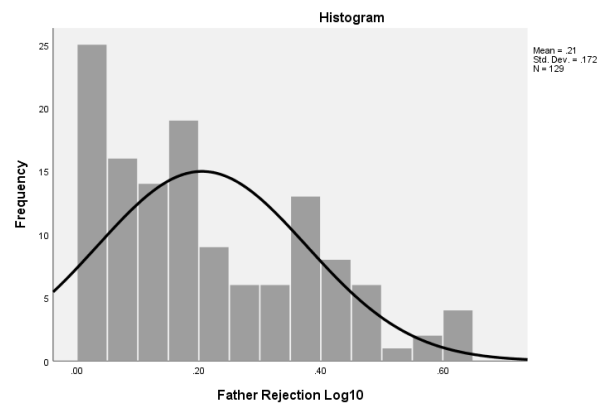
4.7.9 Transformation of the data

Only the self-compassion variable met the criteria for a normal distribution. The s-EMBU variables for the parental behaviour subscales, attachment anxiety and avoidance and social connectedness were not normally distributed, which is not unusual in the social sciences (Pallant, 2013). Much of the data does not fall within an acceptable range for skewness and Kurtosis; therefore, the parametric test assumptions have not been met. A visual examination of the histograms and Q-Q plots provides evidence that many of the variables are not normally distributed.

The skewed data were transformed using an appropriate transformation method that represented the shape of the skew, as recommended by Pallant (2013). The transformations used included a log transformation, square root transformation for the positively skewed data, and a reflect Log10 and reflect SQRT for the negatively skewed data. Once the skewed data were transformed, some of the data for the variables fell within the parameters for normal skewness but not for Kurtosis. Although the data statistically improved, a visual inspection of the histograms and Q-Q plots revealed that the transformed data still looked as skewed as the raw data (see Figures 4.2 & 4.3). Therefore, it was decided that the data for the study should remain untransformed.



z value = Skewness: 4.35 Kurtosis: 1.01
Figure 4.2: Raw data for Paternal Rejection



z value = Skewness: 2.55 Kurtosis: -1.73
Figure 4.3: Log10 Transformed Data for Paternal Rejection

4.8. Descriptive data for the Scales

4.8.1 Central Tendency

Table 4.3, below, shows the descriptive data for each measure and their subscales. Self-compassion is the dependent variable, while the perceived parenting behaviour subscales are the independent variables, and anxious attachment and avoidant attachment and social connectedness are the potential mediators. Due to the data being non-normally distributed (apart from the self-compassion data), the central tendency was computed and summarised to report the median and range/IQR, which is a more appropriate measure of central tendency in the case of skewed data. Most of the medians were more central within the range for the scale, except father rejection and mother rejection, which were closer to the lower end of the scale range. The IQR for each scale produced a good range rather than extreme ranges.

Table 4.3 Descriptive data for the scales and subscales

Variables	N	Mean	Median	IQR	Scale Range	SD	Alpha
Self-compassion (Total)	131	2.79	2.84	(2.25 – 3.33)	1-5	.704	.88
Father's Rejection	129	1.74	1.43	(1.14 – 2.28)	1-4	.759	.89
Father's Emotional Warmth	129	2.54	2.67	(1.83 – 3.17)	1-4	.851	.89
Father's Overprotection	129	2.00	2.03	(1.41 – 2.50)	1-4	.709	.81
Mother's Rejection	130	1.79	1.57	(1.16 - 2.29)	1-4	.713	.85
Mother's Emotional Warmth	130	2.73	2.83	(2.00 – 3.33)	1-4	.831	.89
Mother's Overprotection	130	2.34	2.28	(1.67 – 2.81)	1-4	.703	.82
Anxious Attachment	131	3.02	3.17	(1.89 – 2.81)	1-6	1.20	.94
Avoidant Attachment	131	3.42	3.50	(2.33 – 4.22)	1-6	1.07	.94
Social Connectedness	131	3.82	3.95	(3.40 – 4.60)	1-6	1.00	.94

4.9. Research questions

4.9.1 Research Question One: *Is compassion related to perceived paternal and maternal behaviour?*

Paternal and maternal behaviour were investigated separately. Due to the previously mentioned non-normal distribution of the data, a Spearman's (rho) correlation test was conducted. There was a small positive correlation between self-compassion and paternal emotional warmth (rho=.162) and maternal emotional warmth (rho=.196). However, only maternal emotional warmth was statistically significant ($p=.025$).

There was a small negative correlation between self-compassion and both paternal (rho=-.125) and maternal (rho=-.169) overprotection. However, it was not statistically significant ($p=.160$, $p=.055$, respectively), so there was no relationship between self-compassion and overprotection within the population sampled. There was also found to be a small negative correlation between self-compassion and both paternal (rho=-.254) and maternal (rho=-.320) rejection. The correlation was statistically significant ($p=.004$, $p=.000$, respectively). Therefore, there is a relationship between parental rejection and self-compassion. To

summarise, paternal emotional warmth is not associated with self-compassion (total) or parental overprotection. However, maternal emotional warmth and parental rejection do have an association with self-compassion. The findings are presented in Table 4.4.

Table 4.4 Correlations Between Perceived Parenting and Self-compassion

	<i>SCS (total)</i>
<i>s-EMBU Paternal Emotional Warmth</i>	<i>.162</i>
<i>s-EMBU Maternal Emotional Warmth</i>	<i>.196*</i>
<i>s-EMBU Paternal Rejection</i>	<i>-.254**</i>
<i>s-EMBU Maternal Rejection</i>	<i>-.320**</i>
<i>s-EMBU Paternal Overprotection</i>	<i>-.125</i>
<i>s-EMBU Maternal Overprotection</i>	<i>-.169</i>

****. Correlation is significant at the 0.01 level (2-tailed).

***. Correlation is significant at the 0.05 level (2-tailed).

4.9.2 Research Question Two: Is adult attachment related to perceived paternal and maternal behaviour?

This research used the attachment style measure (ECR-R) with a two-dimensional attachment model to measure adult attachment anxiety and attachment avoidance. The results displayed in Table 4.5., below, reveal that there is a statistically significant relationship between maternal rejection and paternal emotional warmth with attachment anxiety. However, only maternal rejection showed a statistically significant relationship with attachment avoidance. These results reveal that the perceived parenting style of rejection is related to attachment anxiety in the case of both parents, but only maternal rejection is related to attachment avoidance.

Table 4.5 Correlations for Perceived Parenting and Adult Attachment

	<i>Anxiety</i>	<i>Avoidance</i>
<i>s-EMBU Paternal Emotional Warmth</i>	-.241**	-.151
<i>s-EMBU Maternal Emotional Warmth</i>	-.150	-.125
<i>s-EMBU Paternal Rejection</i>	.146	.131
<i>s-EMBU Maternal Rejection</i>	.301**	.246**
<i>s-EMBU Paternal Overprotection</i>	-.002	.018
<i>s-EMBU Maternal Overprotection</i>	.116	-.005

***. Correlation is significant at the 0.01 level (2-tailed).*

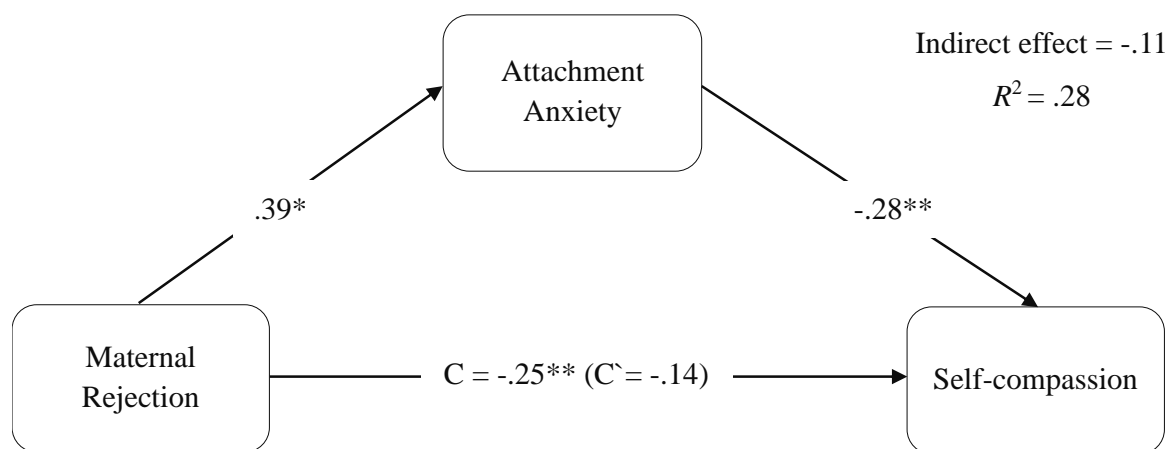
**. Correlation is significant at the 0.05 level (2-tailed).*

4.9.3 Research Question Three: Does attachment mediate the relationship between compassion and perceived parenting behaviour; where there is an association between compassion and attachment?

Mediation analysis was not conducted for those variables where there was no significant bivariate association between the independent variable (IV) and the dependent variable (DV). Due to the non-statistically significant association between paternal emotional warmth and self-compassion, and paternal and maternal overprotection and self-compassion, there would not be an association between these IVs and self-compassion (DV) as a mediator.

Mediation analysis was run for those variables with a significant bivariate association between the IV and DV. Attachment avoidance did not mediate the relationship between perceived parenting in childhood and self-compassion. With regard to maternal emotional warmth and self-compassion, attachment anxiety had no mediatory effect ($b=-.15$, $SE=.08$, ns), and the indirect effect was not significant ($b=.07$, $SE=.04$ CI= [-.005, .144]). Attachment anxiety was shown to have non-significant indirect effects on paternal rejection ($b=-.06$, $SE=.05$ CI= [-.162, .025]). Therefore, the relationship between paternal rejection and self-compassion was not mediated by attachment anxiety or avoidance.

Different results were produced for maternal rejection than for the other parent-rearing subscales when mediated by attachment. When attachment avoidance became the mediator, the lack of a significant indirect effect shows that attachment avoidance had no mediating effect. However, the findings were different when attachment anxiety was used as the mediator. Figure 4.4 shows that maternal rejection had a significant effect on self-compassion ($b=-.25$ $SE=.08$, $p=.004$). However, maternal rejection was no longer significantly related to self-compassion when attachment anxiety was the mediator ($b=-.14$, $SE=.08$, ns). The indirect effect coefficient was significant ($b=-.11$, $SE=.05$ $CI=[-.219, -.023]$), and approximately 28% of the variance in self-compassion was accounted for by the predictors ($R^2=.28$). This indicated that, when maternal rejection is high, attachment anxiety is also high, which predicts lower levels of self-compassion.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 4.4 Maternal Rejection Predicts Self-Compassion when Mediated by Attachment Anxiety.

4.9.4 Research Question Four: Is social connectedness related to perceived paternal and maternal behaviour?

This research question investigated the relationship between perceived parenting behaviour and social connectedness. All but one of the parenting styles significantly correlated with social

connectedness. Paternal overprotection was the only perceived parenting style that did not correlate as presented in table 4.6 below.

Table 4.6 Correlations for Perceived Parenting and Social Connectedness

	<i>Social Connectedness</i>
<i>s-EMBU Paternal Rejection</i>	-.356**
<i>s-EMBU Maternal Rejection</i>	-.372**
<i>s-EMBU Paternal Emotional Warmth</i>	.294**
<i>s-EMBU Maternal Emotional Warmth</i>	.322**
<i>s-EMBU Paternal Overprotection</i>	-.026
<i>s-EMBU Maternal Overprotection</i>	-.206*

***. Correlation is significant at the 0.01 level (2-tailed).*

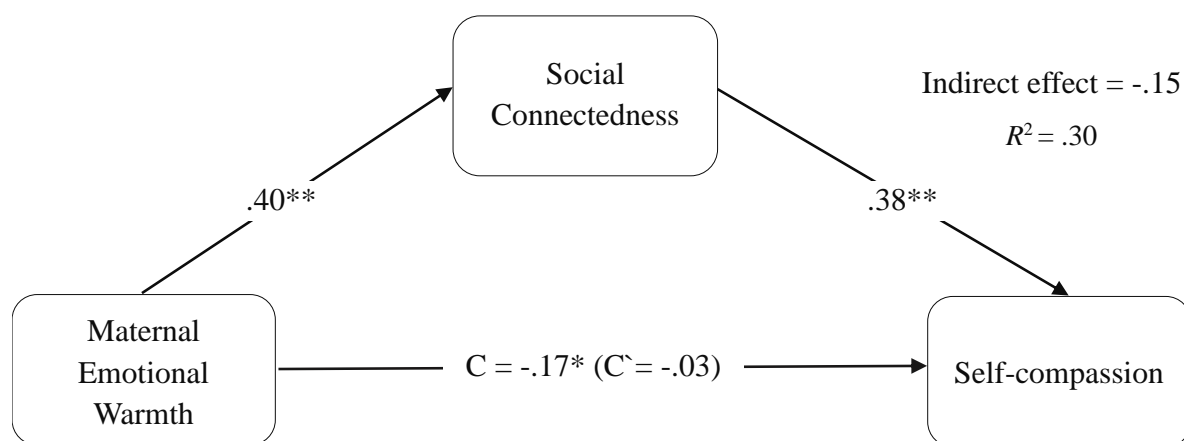
**. Correlation is significant at the 0.05 level (2-tailed).*

4.9.5 Research Question Five: Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?

This part of the study analysed whether there is a relationship between perceived parenting received in childhood and self-compassion when mediated by social connectedness. These variables are based on theoretical assumptions drawn from the literature because they have not been tested before. As previously discussed in Chapter Two, social connectedness may be a protective factor for those who perceived their parenting in childhood as poor. Therefore, social connectedness may have the potential to further explain the individual differences in self-compassion and the variance in self-compassion. Consequently, it is worth exploring the relationship between perceived parenting received in childhood and self-compassion when mediated by social connectedness.

To summarise the previous correlations with regard to self-compassion and the s-EMBU (see Table 4.5), maternal emotional warmth and paternal and maternal rejection were associated with self-compassion. Mediation analysis was not conducted for those variables where there was no significant bivariate association between the independent variable (IV) and the dependent variable (DV), i.e. perceived parenting and self-compassion.

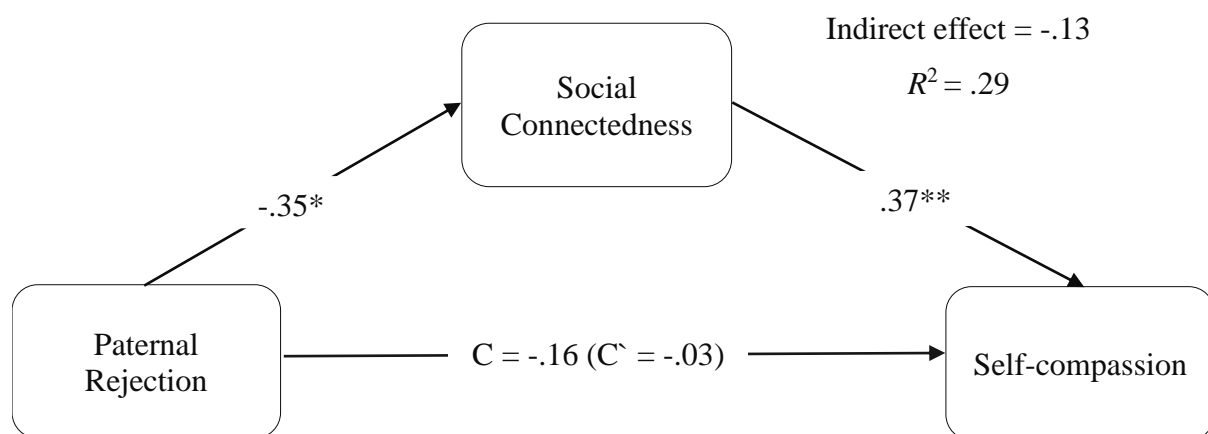
Maternal emotional warmth (Figure 4.5) was found to be significantly related to self-compassion when mediated by social connectedness ($b=.17$ SE=.07, $p=.02$). However, the direct effect of maternal emotional warmth on self-compassion was no longer significant ($b=.03$, SE=.07, $p=.70$) when social connectedness was included in the model as a mediator. Maternal emotional warmth had a significant indirect effect on self-compassion (total score) through social connectedness ($b = .15$, 95% BCa CI [.06, .24]). Approximately 30% of the variance in self-compassion was accounted for by the predictors ($R^2=.30$). Thus, if maternal emotional warmth is high, then social connectedness is also high. In turn, this predicts higher levels of self-compassion.



* $p < .05$, ** $p < .01$, C = Total Effect, C` = Direct Effect

Figure. 4.5 Maternal Emotional Warmth predicts Self-Compassion when mediated by Social Connectedness

Paternal rejection (Figure 4.6) was significantly related to self-compassion when mediated by social connectedness ($b=-.16$ SE=.08, $p=.05$). The total effect of paternal rejection on self-compassion just failed to meet the threshold for statistical significance ($p=0.545$). The direct effect was not statistically significant ($b=-.03$, SE=.07, $p=.70$) when social connectedness was included. Paternal rejection had a significant indirect effect on self-compassion (total score) through social connectedness ($b =-.13$, 95% BCa CI [-.25, -.04]). According to Kenny and Judd (2014) and O'Rourke and MacKinnon (2015), mediation effects can still be present when there is an absence of total effect. However, following Baron and Kenny's (1986) method, this mediation effect would not have met the first condition; therefore, mediation was considered not to have taken place.

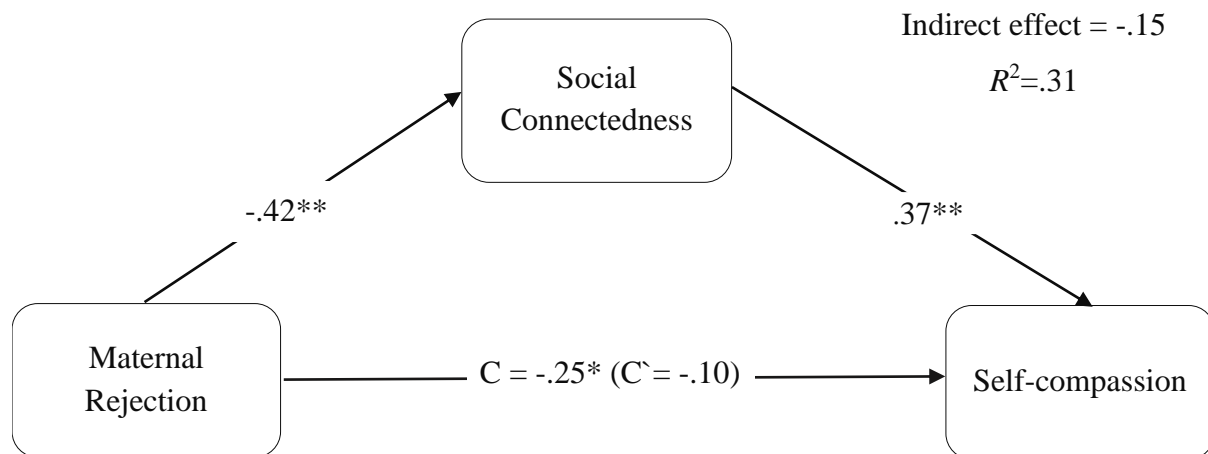


* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 4.6. Paternal Rejection Predicts Self-Compassion when Mediated by Social Connectedness.

Maternal rejection (Figure 4.7) was significantly related to self-compassion when mediated by social connectedness ($b=-.25$, SE=.08, $p=\leq.01$). The direct effect was no longer statistically significant ($b=-.10$, SE=.08, $p=.21$) when social connectedness was used as the mediator, demonstrating that full mediation had occurred. Maternal rejection had a significant indirect effect on self-compassion (total score) through Social Connectedness ($b =-.15$, 95% BCa CI [-.26, -.07]). Approximately 31% of the variance in self-compassion was accounted for by the

predictors ($R^2=.31$). Therefore, if maternal rejection is low, then social connectedness is high, and this, in turn, predicts higher levels of self-compassion.



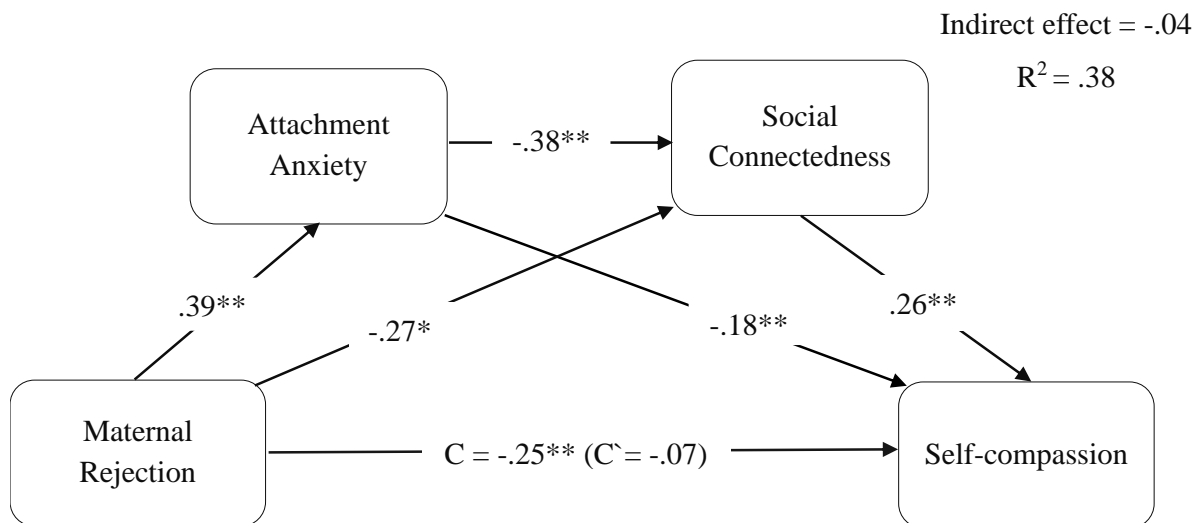
* $p < .05$, ** $p < .01$, C = Total Effect, C` = Direct Effect

Figure 4.7 Maternal Rejection predicts Self-Compassion when mediated by Social Connectedness.

4.9.6 Research Question Six: Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and adult attachment and social connectedness?

The relationship between parenting received in childhood and self-compassion, mediated by attachment anxiety and social connectedness, was assessed using serial mediation (Figure 4.8). Maternal rejection was found to be significantly related to self-compassion when mediated by attachment anxiety and social connectedness ($b=-.25$, SE .08– $p\leq .01$). The direct effect was no longer statistically significant ($b=-.07$, SE .07– $p=.35$) when both mediators were included. Maternal rejection had a significant indirect effect on self-compassion through attachment anxiety and social connectedness ($b = -.04$, 95% BCa CI [-.08, -.01]). Approximately 38% of the total effect operates indirectly, meaning that there is only a 62% direct operating effect on the relationship between maternal rejection and self-compassion. Therefore, if maternal

rejection is high, this leads to high attachment anxiety, which predicts low social connectedness, and also leads to low levels of self-compassion.



*p < .05, **p < .01, C = Total Effect, C' = Direct Effect

Figure. 4.8 Maternal Rejection Predicts Self-Compassion when Mediated by Attachment Anxiety and Social Connectedness

Table 4.7 below, shows the results of the mediation analysis that were conducted where significant correlations were found between the variables.

Table 4.7 Results for the Mediation Analysis of Retrospective Parenting and Self-Compassion via Adult Attachment and Social Connectedness.

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients				Indirect Effect					
			Effect of IV on M (a)	Effect of M1 on M2 (d)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	SE	95% CI [Lower, Upper]	R ²	Findings
Maternal Warmth →	Soc. Connectedness →	Self-compassion	.39**		.38**	.17*	.03	.15	.04	[.07, .24]	.30	significant, full mediation
Paternal Rejection →	Soc. Connectedness →	Self-compassion	-.35**		.37**	-.16	-.03	-.13	.05	[-.25, -.04]	.29	significant, full mediation
Maternal Rejection →	Anxiety →	Self-compassion	.39**		-.28**	-.25**	-.14	-.11	.05	[-.22, -.02]	.31	significant, full mediation
Maternal Rejection →	Avoidance →	Self-compassion	.26		-.13*	-.25	-.22	-.03	.03	[-.10, .00]	.10	non-significant mediation
Maternal Rejection →	Soc. Connectedness →	Self-compassion	-.42**		.37**	-.25**	-.10	-.15	.05	[-.26, -.07]	.31	significant, full mediation
Maternal Rejection →	Anxiety → Soc. Con →	Self-compassion	.39**		-.38**	-.25**	-.07	-.04	.02	[-.09, -.01]	.38	significant, full mediation
Maternal Rejection →	Avoidance → Soc. Con →	Self-compassion	.26		-.29**	-.25**	-.09	-.03	.02	[-.06, -.00]	.31	non-significant mediation

p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Soc. Connectedness = Social Connectedness; Anxiety = Adult Attachment Anxiety; Avoidance = Adult Attachment Avoidance; SE = Standard Error; CI = Confidence Level.

IV = Independent Variable (Perceived Parenting); M1: Mediator 1 = Adult Attachment; M2: Mediator 2 = Social Connectedness; DV = Dependent Variable (Compassion)

4.9.7 Summary

The relationship between maternal rejection and self-compassion was the only parenting style that was significantly mediated by attachment anxiety. Meanwhile, the relationships between paternal rejection and maternal rejection with self-compassion were all significantly mediated by social connectedness. However, only the relationship between maternal emotional warmth and self-compassion was significantly mediated by social connectedness. When paternal and maternal rejection is low, and social connectedness is high, levels of self-compassion are high. When maternal emotional warmth is high, and social connectedness is high, levels of self-compassion are also high. When the serial mediation was run, maternal rejection had a significant indirect effect on self-compassion when mediated by both attachment anxiety and social connectedness.

4.10 Discussion

4.10.1 Overview

The aim of this study was to investigate the relationship between parenting received in childhood and Neff's (2003b) self-compassion scale (total score). It also explored whether adult attachment (anxiety and avoidance) and social connectedness were mediators of this association. This section discusses each of the study's research questions, the results produced in relation to these questions, and how they compare with the findings of previous studies.

4.10.2 Research Question One: Is compassion related to perceived paternal and maternal behaviour?

This study was designed to ascertain whether parental behaviour recalled during childhood was related to self-compassion in adulthood. Neff (2003b) proposed that self-compassion can be measured using three subscales: self-kindness, common humanity and mindfulness. However,

not only does using an overall SCS score simplify the statistical analyses, but according to Neff (2015), it is also likely to be a more effective way to represent self-compassion. Although the subscales may offer a greater depth of insight into different aspects of self-compassion, for the purposes of clarity, the total self-compassion scale was used.

Perceived parental behaviour was investigated separately with regard to paternal and maternal behaviour. The first research question sought to discover whether compassion was related to perceived parenting behaviours. Paternal and maternal rejection had a negative relationship with self-compassion, and there was a positive relationship between maternal emotional warmth and self-compassion. Maternal rejection had a greater significant and negative association with self-compassion ($\alpha = -.320$, $p < 0.01$) than paternal rejection ($\alpha = -.250$, $p < 0.01$), albeit that the difference was small. Maternal emotional warmth had a significant and positive correlation with self-compassion. However, in the case of paternal emotional warmth, there was no significant association. This was consistent with the finding that maternal overprotection had a greater and negative correlation with self-compassion than paternal overprotection, although neither was statistically significant. It is generally considered that the primary caregiver, who is still usually the mother in most cases, forms a stronger base for the development of self-to-self relating (Bowlby, 1982).

These findings indicate that self-compassion was associated with perceived parenting behaviour in the case of both paternal and maternal rejection and overprotection (negatively) and emotional warmth (positively). Paternal and maternal overprotection and paternal emotional warmth were, therefore, not associated with self-compassion. However, paternal and maternal rejection and maternal emotional warmth were significantly correlated, thus showing that there was a relationship between these parenting behaviours and self-compassion within

the population sampled in this study. This suggests that experiences of emotional warmth and rejection from the primary caregivers are internalised, leading to an individual becoming self-critical or self-compassionate in times of difficulty (Gilbert, 1989; 1995; 2005), but it could also be the case that people who are self-compassionate may remember their parents and their parenting behaviours in a less critical way.

The findings regarding the relationship between maternal emotional warmth and self-compassion could indicate that the mother may still be the primary caregiver in most cases. A study by Neff and McGehee (2010) investigated the role of maternal support as a predictor of individual differences in self-compassion and found that maternal support predicted self-compassion. However, they did not investigate the role of paternal support and individual differences in self-compassion. It has been suggested that fathers are becoming increasingly involved in childrearing (Sanderson & Thompson, 2002) and their parenting behaviours would, therefore, be expected to have a greater impact. The mean ages of the population examined in Neff and McGehee's (2010) study were 15.2 years and 21.1 years and so they may still have been (or have recently been) under the influence of parental behaviour, most probably from their mothers. The mean age of this study's population was 35.95 years, so the participants were less likely to be or have recently been directly under the influence of parental behaviour. Therefore, it is more likely that these relationships had been internalised and thus give an indication of how they self-relate (or self-to-self relate), due to it being a retrospective measure (Gilbert, 2005). However, there may be other factors that influence parental behaviour and individual differences in self-compassion. Individuals may overcome the influence of their early experiences and their level of self-compassion in adulthood. Compassionate relationships throughout an individual's lifetime may weaken the influence of the type of self-to-self relating

that was learned in childhood (Gilbert, 2005). The following sections of this study discuss in detail other possible influences on an individual's level of self-compassion.

4.10.3 Research Question Two: Is adult attachment related to perceived paternal and maternal behaviour?

This research question aimed to determine whether there was a relationship between perceived parenting behaviours and adult attachment. Paternal rejection and paternal emotional warmth were found to be related to anxiety. Maternal rejection was shown to be related to attachment anxiety and avoidance.

As previously mentioned in the Introduction, those with secure attachment exhibit low levels of anxiety or avoidance, and those with insecure attachment styles exhibit anxiety and avoidance patterns (Brennan, Clark & Shaver, 1998). It is likely that those with secure attachment in their early years will apply the same attachment style to their romantic relationships (Hazan & Shaver, 1987). Keeping this in mind, the results of this study demonstrate that there were significant associations between perceived paternal and maternal behaviour and adult attachment, which supports the aforementioned theory.

4.10.4 Research Question Three: Does attachment mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and attachment?

This research question was investigated in accordance with Baron and Kenny's (1986) three steps of regressions method, which is the widely used method. Where there was a significant association between the independent variable (perceived parenting) and the dependent variable (self-compassion), the appropriate next steps were followed to establish that mediation had

occurred. The perceived parental behaviours with a significant relationship were paternal and maternal rejection and maternal emotional warmth. The relationship between maternal rejection and self-compassion was significantly mediated by attachment anxiety. Attachment Anxiety, an insecure adult attachment style, was negatively associated with self-compassion, meaning that when an individual has high attachment anxiety, they will also have lower levels of self-compassion. This could be because attachment anxiety is characterised by a fear of being rejected or feeling abandoned (Brenman et al., 1998). Therefore, these findings could provide support for the idea that rejection from a primary caregiver can result in an individual becoming self-critical (Gilbert, 2005) and to these feelings being internalised and affecting their levels of self-compassion during difficult events. Thus, insecure attachment, or in this case, attachment anxiety, mediates the relationship between maternal rejection and self-compassion.

Research suggests that adult romantic relationships function similarly to the infant-caregiver relationship. For example, those individuals with a father or mother who exhibited behaviour associated with rejection, or which they perceived as such, may feel unlovable or unworthy, and these feelings may manifest in their adult romantic relationships too. Evidence suggests that individuals end up in relationships with partners who confirm the individual's beliefs about attachment relationships (Frazier et al., 1997). Therefore, this study may explain why, when an individual experiences a high level of parental rejection, they have high attachment anxiety, which affects their level of self-compassion.

The findings of this study were similar to those of Pepping et al. (2015), in that attachment anxiety but not avoidance was shown to mediate the effects of perceived parenting in childhood and self-compassion. However, although Pepping et al. (2015) found a small negative

correlation between attachment avoidance and self-compassion, other studies have found no association between attachment avoidance and self-compassion (Neff & McGehee, 2010; Wei et al., 2011).

The ECR is a two-dimensional model of adult attachment (anxious and avoidant) (Brennan, Clark & Shaver, 1998; Fraley, Waller & Brennan 2000). However, avoidance can be subdivided into two different types of avoidance behaviour: dismissive-avoidance and fearful-avoidance. Fraley and Shaver (1997) found that dismissive-avoidant individuals (high avoidance, low anxiety) were able to suppress thoughts and feelings. This enables them to minimise the impact of attachment-related thoughts. However, they were still as psychologically distressed by them as other individuals. By contrast, fearful avoidant individuals (high avoidance, high anxiety) were not able to suppress their emotions to the same degree.

These two different types of avoidance and their different behaviours may explain why attachment avoidance does not mediate the relationship between perceived parenting and self-compassion. In this study, it was also found that paternal rejection was not mediated in its relationship with self-compassion, unlike maternal rejection. As previously stated, the primary caregiver is more likely to be an individual's mother or female relation, and this may have an influence on how they perceive their parenting in childhood. This is a topic that could be explored more fully in future research.

4.10.5 Research Question Four: Is social connectedness related to perceived paternal and maternal behaviour?

This research question aimed to determine whether there was a relationship between perceived parenting behaviours and social connectedness. All the parenting behaviours except paternal

overprotection were found to have a significant association with social connectedness. For all the significant associations, this demonstrates the association between social connectedness and perceived parenting behaviours, which may constitute a key aspect of development that evolves early in life and extends throughout a person's lifespan (Kohut, 1984; Lee & Robbins, 1995). As mentioned earlier, if social connectedness acts as a protective factor, it may play a mediating role in coping with adversity (Lee et al., 2008; Yoon & Lee, 2010). The significant associations between social connectedness and perceived parenting make it a potential mediatory factor in the relationship between perceived parenting and self-compassion.

4.10.6 Research Question Five: Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?

This study is the first to explore the relationship between perceived parenting in childhood and self-compassion when mediated by social connectedness. Paternal and maternal emotional warmth and maternal rejection were found to have a significant relationship with self-compassion when mediated by social connectedness.

In this study, when parental (paternal and maternal) emotional warmth is high, social connectedness is high, and in turn, levels of self-compassion are also high. Social connectedness is associated with a universal sense of belongingness in the social world (Lee & Robbins, 1995). A sense of social connectedness is thought to develop in childhood and extends throughout the lifespan (Baker & Baker, 1987; Lee & Robbins, 1995). Those individuals with high social connectedness are more likely to feel very close to other people, identify with them, perceive them as friends and participate in social groups and group activities. In a study by Neff, Kirkpatrick and Rude (2007), it was found that those who experienced an increase in self-

compassion also experienced an increase in their sense of social connectedness. It could therefore be the case that social connectedness functions as a protective factor, in the sense that if an individual perceives their parent's parenting behaviour as negative, having a good sense of connectedness to a wider range of positive relationships improves their sense of self.

Maternal rejection was also found to be related to self-compassion when mediated by social connectedness. Those who experience acute and repeated rejection, abandonment and isolation are more likely to develop low levels of connectedness in adulthood (Lee & Robins, 1995). This may explain why the results of this study showed that when there is high parental rejection, social connectedness is low and, consequently, so is self-compassion. Social connectedness could therefore explain the relationship between maternal rejection and self-compassion, in a similar way to attachment anxiety, although attachment anxiety only significantly mediated the relationship between maternal rejection and self-compassion. However, social connectedness could be one factor that explains the variance in levels of self-compassion.

4.10.7 Research Question Six: Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and adult attachment and social connectedness?

Pepping et al. (2015) found that adult anxiety but not attachment avoidance accounted for 15.3% of the variance in self-compassion. This study found that the mediating role played by adult attachment anxiety on the relationship between maternal rejection and self-compassion accounted for 28% of the variance in self-compassion and maternal rejection, while social connectedness accounted for 31% of the variance in self-compassion. The results from the serial mediation that included both mediators (attachment anxiety and social connectedness) showed that the indirect effect accounted for 38% of the variance in Self-compassion. Although the serial mediation model accounted for 38% of the variance in Self-compassion, which was

higher than the percentage of variance in self-compassion accounted for by attachment anxiety or social connectedness, the variance in self-compassion was not as high as would have been expected, probably because attachment anxiety and social connectedness had a high negative correlation (-0.38 , $SE .11$, $p \leq .01$). This further supports Pepping et al. 's (2015) argument that the relationship between parenting received in childhood and self-compassion may be complex.

4.10.8 Summary

The relationship between maternal warmth and self-compassion was only mediated by social connectedness but not by attachment anxiety. Only the relationship between maternal rejection and self-compassion was mediated by both mediators (attachment anxiety and social connectedness). Perceived poor parenting, for example, a high level of maternal rejection in childhood, predicts higher attachment anxiety, which consequently predicts lower levels of self-compassion. Attachment anxiety accounts for some of the variance in self-compassion (28%). Poor parenting (high maternal rejection) in childhood predicts lower social connectedness, and thus lower levels of self-compassion. Social connectedness accounts for 31% of the variance in self-compassion (R^2). When both attachment anxiety and social connectedness are the mediators, high maternal rejection predicts high attachment anxiety, which predicts low social connectedness, and low social connectedness predicts low levels of self-compassion. Both mediators account for 38 % of the variance in self-compassion.

4.10.9 Limitations, Strengths and Future Research

Some of the data was non-normally distributed, and a \log_{10} transformation did not improve the distribution, so it was decided that the data should remain untransformed for the study. Variables with non-normal distributions are commonly used in a variety of psychological and social research, so non-parametric tests were run when and where appropriate. Therefore,

caution should be exercised when generalising these results due to the non-normal distribution of some of the data, which may affect the stability of the model.

As previously stated, Pepping et al. (2015) examined the relationship between perceived parenting in childhood and self-compassion via attachment anxiety but did not report the results separately for the perceived parenting of the father and mother in childhood. They found associations for each of the parental parenting styles with self-compassion mediated by attachment anxiety, but this study found that only maternal rejection and self-compassion were significantly mediated by attachment anxiety. By extending this construct and exploring the relationship between perceived parenting and self-compassion when social connectedness was included in the model as a mediator, it was found that maternal emotional warmth and maternal rejection both predicted self-compassion. The variance was increased (38%) when both mediators were included in the relationship between maternal rejection and self-compassion.

While the findings of this chapter have extended knowledge about the relationship between perceived parenting in childhood, most studies in the literature review in Chapter Two used the self-compassion scale, and it may therefore be useful to explore the idea of employing a different compassion scale that could also examine different dimensions of compassion and how they interact with perceived parenting in childhood. Therefore, in the following chapter, a more recent construct of compassion that measures different dimensions of compassion is analysed in order to further explore the relationship between perceived parenting in childhood and compassion and discover more about the mediatory roles played by adult attachment and social connectedness.

Chapter Five

The Three Orientations of Compassion

5.1 Introduction

The previous chapter explored the relationship between perceived parenting and self-compassion. In this chapter, the relationship between perceived parenting and compassion is assessed using an alternative measure of compassion. This chapter aims to explore the factors that may mediate the effect of the alternative compassion measure by examining the orientations of compassion that it assesses.

5.1.1 Chapter Overview

The aims of this chapter are to examine the relationship between retrospective parenting received in childhood and three orientations of compassion using the Compassionate Engagement and Action Scales. The relationship between retrospective parenting received in childhood and the three orientations of compassion (CEAS; self-compassion, compassion for others and compassion from others) and the mediatory effects of adult attachment (anxiety and avoidance) and social connectedness are also examined.

5.1.2 Previous Chapter

In Chapter Four, the results of the study showed that attachment anxiety but not attachment avoidance mediated the relationship between some of the subscales of the s-EMBU (Arrindell et al., 2005) and the self-compassion scale (Neff, 2003b). Firstly, there was found to be a relationship between maternal rejection and self-compassion, with attachment anxiety as a mediator. Secondly, the relationship between both paternal and maternal rejection and maternal emotional warmth in childhood and self-compassion was found to be mediated by social

connectedness. Finally, there was a relationship between maternal rejection and self-compassion when both attachment anxiety and social connectedness acted as mediators. Within the study population, higher maternal rejection was associated with higher attachment anxiety, which in turn was associated with lower levels of self-compassion. These results support the findings of previous studies (Kelly & Dupasquier, 2015; Pepping et al., 2015; Wei et al., 2011). However, in this study, it was only maternal rejection that had statistically significant associations with self-compassion. This could have been due to a shortcoming in the SCS (Neff, 2003b) namely, that its bipolar constructs combine the negative and positive items in a single construct; consequently, these single constructs give an overall indicator of self-compassion rather than polarised negative and positive constructs. When exploring the mediatory effects of social connectedness, higher maternal rejection was associated with lower social connectedness, which in turn was associated with low self-compassion. Both attachment anxiety and social connectedness were found to account for some of the variance in self-compassion, with attachment anxiety accounting for 28% of the variance in self-compassion, social connectedness accounting for 31% of the variance in self-compassion, and 38% of the variance when both mediators were included.

5.1.3 Three Orientations of Compassion

The Compassionate Engagement and Action Scales (CEAS) (Gilbert et al., 2017) is a newly constructed measure comprising different orientations or flows for compassion. It focuses on the directional components of compassion: self-compassion, compassion for others and compassion from others. Until recently, Neff's (2003b) Self-Compassion Scale was the main construct used to measure self-compassion. Hence, it is worthwhile exploring whether Gilbert et al.'s (2017) Compassionate Engagement and Action Scales produced more informative results. Not only does it measure the concept of self-compassion, but it also measures two

further orientations (compassion for others and compassion from others). Investigating these may help to extend our understanding of the relationship between perceived parenting in childhood and compassion.

5.1.4 Rationale for this study

As in the previous chapter, the focus is to establish the relationship between perceived parenting in childhood and self-compassion and if adult attachment (anxiety and avoidance) and social connectedness are possible underlying mechanism by which perceived parenting and self-compassion are associated. Additionally, the focus is to establish the relationship between perceived parenting in childhood and compassion to others (giving compassion) and from others (receiving compassion and whether adult attachment (anxiety and avoidance) and social connectedness are also possible underlying mechanism by which perceived parenting and self-compassion are associated. Hence an individual's perceived parenting may predict adult attachment or social connectedness which in turn predicts an individual's capacity for self-compassion, giving compassion and receiving compassion. The overall aim of this study is to investigate individual differences in the three orientations of compassion.

Gilbert et al.'s (2015) Compassionate Engagement and Action Scales allow the three orientations of compassion, or flows of compassion, to be investigated. While it is generally understood that self-compassion is positive, little is known about how the orientations of compassion within the CEAS (self-compassion, compassion for others and from others) relate to perceived parenting behaviour and adult attachment and social connectedness.

The previous chapter demonstrated that anxious attachment and social connectedness in adulthood mediated the relationship between perceived parenting in childhood and self-

compassion. It is anticipated that the relationship between perceived parenting in childhood and the orientation of compassion for self in the CEAS may be mediated by attachment anxiety but not by attachment avoidance, as found in Pepping et al.'s (2015) study. It is also anticipated, based on the findings of the previous chapter, that paternal and maternal rejection and maternal emotional warmth may predict the orientation of compassion for self when mediated by attachment anxiety and social connectedness. With regard to the orientations of compassion for others and from others, it is difficult to make predictions about the likely results.

Gilbert et al.'s (2017) Compassionate Engagement and Actions Scale is the only scale used to measure compassion for oneself, the giving and receiving of compassion, and how an individual engages with and acts upon compassion. This study uses Gilbert et al.'s (2017) measure to examine the relationship between perceived parenting in childhood and the three orientations of compassion, which may provide a greater understanding of the giving and receiving of compassion and the influence that parenting behaviour, adult attachment and social connectedness has on compassion.

5.1.5 Research Aims, Objectives and Research Questions

This study investigates the relationship between parenting received in childhood and the three orientations of compassion, using Gilbert et al.'s (2017) Compassionate Engagement and Actions scale. It also explores whether adult attachment (anxiety and avoidance) and social connectedness mediate the association with the three orientations of compassion. The following aims, objectives and research questions, which are related to the aims set out at the end of Chapter Two, are explored in the study described in this chapter, which examines self-compassion, compassion for others and compassion from others.

5.1.5.1 Research Aims

The research aims of this study:

1. To explore the relationship between perceived parenting behaviour and three orientations of compassion when mediated with adult attachment.
2. To explore the relationship between perceived parenting behaviour and three orientations of compassion when mediated with social connectedness.
3. To explore the relationship between perceived parenting behaviour and the three orientations of compassion when mediated with adult attachment and social connectedness.

5.1.5.2 Research Objectives

Research objectives in this research:

1. To determine whether there is a relationship between perceived parenting behaviour and the three orientations of compassion when mediated with adult attachment.
2. To determine whether there is a relationship between perceived parenting behaviour and the three orientations of compassion when mediated with social connectedness.
3. To determine whether there is a relationship between perceived parenting behaviour and the three orientations of compassion when mediated with adult attachment and social connectedness.

5.1.5.3 Research Questions

The study described in this chapter seeks to explore the research questions using the Compassionate Engagement and Action Scales as a measure of compassion. The following research questions relate to those addressed in Chapter Three, using the CEAS to measure compassion:

1. Is compassion related to perceived paternal and maternal behaviour?

2. Is adult attachment related to perceived paternal and maternal behaviour?
3. Does adult attachment mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and attachment?
4. Is social connectedness related to perceived paternal and maternal behaviour?
5. Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?
6. Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and adult attachment and social connectedness?

5.2. Method

5.2.1 *Study Design*

Correlations between perceived parenting behaviours and the orientations of compassion (self-compassion, compassion for others and compassion from others) are tested. Where there is a statistically significant correlation, the mediatory effect of adult attachment is tested. Next, the relationship between perceived parenting and the orientations of compassion (self-compassion, compassion for others and compassion from others), mediated by social connectedness, is tested. Finally, a serial mediation model, which includes adult attachment and social connectedness, is tested to discover what, if any, indirect effect they have on the relationship between perceived parenting and those orientations of compassion that are correlated with perceived parenting behaviours.

5.2.2 Participants

5.2.2.1 Participant Eligibility

The criteria for this study were the same as described in the previous chapter (Chapter Four): a cross-sectional design based on self-report scales was utilised, for a sample recruited from the general population. Participants had to be adults aged over 18 with a good understanding of the English language, although those whose English was not proficient enough to understand the questions in the questionnaire were unlikely to choose to take part in the study. In the case of the data from the online questionnaires, those participants who did not finish the questionnaires were presumed to have withdrawn their consent. With regard to the paper questionnaires, all the participants consented to the use of their data and checked the consent box to indicate that they met the inclusion criteria. Data from both the online and paper questionnaires were then combined.

5.2.2.2 Sample Size

The sample size for this study was calculated in the same way as described in the previous chapter. Please refer to section 4.2.2.2. for details on the calculations. Due to the indirect median sample size range of 115 – 285 participants (median 142.5), the aim was to recruit at least 115 participants. For this study, data from 146 participants were used, which meant that the minimum requirement for a sample size had been met.

5.2.2.3 Recruitment of Participants

With regard to the online survey, the participants were recruited through advertisements on websites, internet forums, and social media networks (i.e., Facebook, Twitter). A snowball sampling method was used to reach a large number of prospective participants. The questionnaires were completed via an online survey hosted by Qualtrics. In the case of the

paper questionnaire, participants posted their completed questionnaires back to the researcher in envelopes provided via Freepost. Paper copies were used to reach participants who might not otherwise have accessed the online version of the survey.

5.3 Measures

In this section, each of the measures used is described, and to avoid repetition, those measures used in the study discussed in the previous chapter (Chapter Four: s-EMBU, ECR-R, SCoN) are only briefly described. The measures used in the study for this chapter are the s-EMBU, the ECR-R, the SCoN and the CEAS.

5.3.1 Demographic Information

The same demographic information that had been collected for the studies described in previous chapters was gathered for this study (see Appendix D). The data collected may be helpful in terms of understanding and interpreting the results and determining to whom the findings can be generalised.

5.3.2 Perceived parenting received in childhood: Short Form Egnå-Minnen Beträffande Uppfostran - s-EMBU (Arrindall et al., 1999) (see Appendix A).

The short form s-EMBU was originally entitled 'My Memories of Upbringing' in Swedish. It measures adults' perceptions of their parents and how they were brought up. The s-EMBU is designed to measure the respondent's memories of parenting received from both their mother and father. It contains 23 items divided into three scales: Emotional Warmth (6 items), Rejection (7 items), and Protection (9 items). Question 9 was omitted from the scoring of this subscale because it failed to show consistently high loadings on the Swedish version of the Protection subscale relating to the mother (Arrindell et al., 1999)

5.3.3 Attachment: Experiences in Close Relationships Scale (Revised)- ECR-R (Fraley et al. 2000) (Appendix E).

The ECR-R is a 36-item instrument used to measure adult attachment and is divided into two subscales of attachment: Anxiety and Avoidance. Participants are asked about how they generally experience relationships. Both subscales contain 18 items. The items are rated on a 7-point Likert scale from 1-7. Low scores on both subscales are indicative of secure attachment.

5.3.4 Social Connectedness: - The Social Connectedness Scale (Revised) (Lee, Draper & Lee, 2001) (Appendix F).

The Revised Social Connectedness Scale measures the degree to which an individual perceives their connection to themselves and those around them. The revised version contains 20 items and is the most commonly used version of the scale. The items are rated on a 5-point Likert scale from 1 - 5. Higher scores indicate a stronger sense of connectedness.

5.3.5 The Compassionate Engagement and Action Scales (CEAS) (Gilbert et al.,2017) (Appendix C).

The CEAS measures three aspects of compassion: self-compassion, compassion for others, and compassion from others, with high scores indicating greater compassion. The first scale measures self-compassion and the degree to which people can be compassionate to themselves. The second scale assesses the degree to which an individual has an interest in being compassionate for others. The third scale measures the degree to which an individual feels that those who are important in their lives can be compassionate to their distress. Each of the three scales contains eight questions (engagement orientation), relating to a person's ability to be motivated to engage with feelings or things that may be difficult rather than avoiding or

suppressing those feelings or things. The five questions pertaining to the action orientations are concerned with the ability to be aware of pain, to learn to make sense of it, and take positive and helpful action. Each orientation is scored on a 10-point Likert scale (from 1=never to 10=always). The Cronbach's alpha values for compassion for others were as follows: engagement $\alpha=.90$ and action $\alpha=.94$; and for compassion from others: engagement $\alpha=.89$ and action $\alpha=.91$. Engagement with self-compassion was divided into two subscales: sensitivity to suffering $\alpha=.77$ and with suffering $\alpha=.72$; and action $\alpha=.90$ (Gilbert et al., 2017). However, for this study, the self-compassion subscale was used in its entirety. This newly developed scale has been previously used within a population of college or university students in three different countries (UK, USA and Portugal).

5.4 Ethical Considerations

5.4.1 Consent

For full information about the online questionnaire, please refer to section 4.1.1 in Chapter Four. Informed consent was obtained via the use of radio buttons, which allowed participants to indicate that they had read and understood the main aspects of the consent information. In the paper questionnaires, there was a check box to be ticked by participants to show that they agreed to participate in the study (See Appendix I).

5.4.2 Confidentiality, Data Access, Storage and Security, and Risk Management

For this section, in order to avoid repetition, please refer to sections 4.4.2. through to 4.4.4. in the previous chapter for further details.

5.5 Procedure

5.5.1 *Participants*

Before filling in the questionnaire, participants needed to provide their consent electronically. They were advised that they could choose to withdraw from the study at any time or leave questions unanswered without needing to give any reasons. They were also advised that once they had submitted their responses, it would not be possible to remove the submitted data due to it being anonymised. This information was stated on the Participation Information Sheet at the beginning of the questionnaire (Appendix H). Participants were asked to confirm their eligibility and consent to participate (Appendix I). Once they had completed all the questions, the final page of the questionnaire provided a list of organisations from which they could get further support and advice if participating in the survey had caused them any discomfort (Appendix J).

5.5.2 *Data Collection*

The collection of data lasted for approximately six months, from January to June 2018. Once a participant had submitted their responses to the questionnaire, the data was downloaded into an SPSS program (SPSS for Windows, version 29.0) directly from Qualtrics so as to minimise the potential for errors during manual input. The data gathered from the paper version of the questionnaires received were manually entered into a different SPSS spreadsheet, and then both datasets were merged into one, ready for data analysis.

5.6 Data Analysis

Models 4 and 6 were used for the mediation analysis. For the study referred to in this chapter, the outcome variable is the three orientations of compassion (self-compassion, compassion for

others, compassion from others). For more information, please refer to section 4.6 in Chapter Four.

5.6.1 Research Question One: Is compassion related to perceived maternal and paternal behaviour?

For this study, the above question is answered by taking an overall view of the three orientations of compassion, analysed separately rather than as a single measure of compassion. To simplify the mediation analysis, only the three orientations of compassion (self, giving, receiving) are used rather than their action and engagement subscales. Correlation analysis is conducted to examine whether there were associations between each of the orientations of compassion and perceptions of parental behaviour. Perceived parenting behaviour is explored in terms of rejection, overprotection and emotional warmth in the case of both fathers and mothers, and analysed separately.

5.6.2 Research Question Two: Is adult attachment related to perceived paternal and maternal behaviour?

For this study, it should be noted that the participants differed from those in Chapter Four and hence the results produced may also be different. Correlational analysis was deemed most appropriate to examine whether there were associations between adult attachment and perceived parental behaviour. To conduct the analyses, the sub-scales of adult attachment (attachment anxiety and attachment avoidance) scores were explored with rejection, overprotection and emotional warmth from both fathers and mothers, and analysed separately.

5.6.3 Research Question Three: Does attachment mediate the relationship between the orientations of compassion and perceived parenting behaviour where there is an association between compassion and attachment?

Following the method previously described in Chapter Four, Baron and Kenny's (1986) three steps of regressions method is used. In step one, perceived parenting behaviour must predict each of the orientations of compassion. In step two, perceived parenting behaviour must predict adult attachment (attachment anxiety and avoidance). In step 3, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and adult attachment (attachment anxiety and avoidance) must predict each of the three orientations of compassion.

5.6.4 Research Question Four: Is social connectedness related to perceived paternal and maternal behaviour?

Correlational analysis was used to examine whether there were associations between social connectedness and perceived parental behaviour. To conduct these analyses, social connectedness was explored as a single score, with rejection, overprotection and emotional warmth from fathers and mothers, which were analysed separately.

5.6.5 Research Question Five: Does social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between compassion and social connectedness?

Using Baron and Kenny's (1986) three steps of regressions method, in step 1, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) must predict each of the orientations of compassion. In step 2, perceived parenting behaviour must predict social connectedness. In step 3, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and social connectedness must

predict each of the orientations of compassion. This is investigated using correlation analyses, followed by a mediation analysis using Model 4 to determine whether social connectedness is a potential mediator.

5.6.6 Research Question Six: Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and adult attachment and social connectedness?

Assuming that the criteria for the three steps of regressions have been met in the previous questions (5 & 6), a serial mediation analysis using Model 6 would then be conducted to determine whether adult attachment and social connectedness are potential mediators.

5.7 Results

5.7.1 Data Screening

All the variables were checked for errors in the data. The scores of all the variables fell within the expected minimum and maximum range. The frequencies for each variable were checked, and all the items fell within the relevant scale and, therefore, no spurious data were found.

5.7.2 Missing Variables

Any missing data were assigned the code '999'. Of the 176 total respondents, 87 participants completed the online questionnaires. Out of those 87 who started the online survey, 26 did not finish, and were presumed to have withdrawn consent for their data to be used in the data analysis. Of the 89 participants who returned the paper version of the questionnaires, all had checked the consent box. However, 4 participants were excluded from the analysis due to non-completion of one or more measures. Seven participants did not provide any demographic data, but their responses to other measures in the survey were used in the data analysis. Data provided

by those who answered questions only for the father or mother in the s-EMBU remained in the analysis. This resulted in data for a total of 146 participants remaining in the analysis.

The questionnaires were designed to minimise missing data, by prompting the participants if a question was missed. This allowed the respondents to leave a question unanswered in accordance with the ethical approval provided for the study, but not to omit a question in error. The s-EMBU survey was the exception to this as the design did not prompt missing questions, to enable participants to leave questions unanswered for either the mother or the father as their primary caregivers in childhood. It also allowed question 15, '*I felt that my parents liked my brother(s) and/or sister(s) more than they liked me*' (Arrindell et al., 2001), to be left unanswered by those without siblings. In the paper version of the questionnaire, some respondents had missed certain questions, which could have been due to an error when completing the survey. One respondent who completed the paper survey had circled two numbers on the same scale for a question, presumably in error, and therefore, their data could not be used for that question.

5.7.3 Demographics

The demographic information is shown in Table 5.1. Of the 146 respondents, only 85% (n=123) stated which country they reside in. Their responses were as follows: (United Kingdom (n=24), England (n=72), (Great) Britain (n=3), Wales (n=6), Scotland (n=2), but these were all grouped under the same geographical area, i.e. the United Kingdom (n=107). The mean age of the participants was 43.42 years, with an age range of between 18 and 84 years. Of those who answered the question on gender, 65.1% were female (n=95), 30.2% were male (n=42), and 1.4% preferred not to specify (n=2). Out of the 146 participants, the largest proportion were married (36.3%; n=53). With regard to ethnicity, the highest percentage of participants were

white British, (71.9%; n=105), with the majority of these coming from the United Kingdom (73%; n=107). In terms of education, the highest proportion of participants had a degree or higher degree (45.9%; n=67). With regard to occupation, the highest percentage were students (24.7%; n=36).

Table 5.1 Participants Demographics.

Variable	N	Percentage (%)
Mean Age 43.42 (SD)		
TOTAL	139	100
Gender		
Male	42	28.8
Female	95	65.1
Prefer not to say	2	1.4
Missing	7	4.8
Total	146	100.0
Marital Status		
Single/Never married	51	34.9
Married	53	36.3
Living with a partner	16	11.0
Separated/Divorced	10	6.8
Widowed	7	4.8
Civil Partnership	-	-
Missing	9	6.2
Total	146	100.0
Ethnic Group		
White British	105	71.9
White Irish	4	2.7
Other White Background	15	10.3
Black Caribbean	-	-
Black African	-	-
Other Black Background	1	.7
White & Black African	1	.7
White & Black Caribbean	2	1.4
White Asian	1	.7
Other Mixed Background	1	.7
Indian	1	.7
Other Asian Background	3	2.1
Other Ethnicity	3	2.1
Missing	9	6.2
Total	146	100.0
Country		
United Kingdom	107	73.3

United States of America	4	2.7
France	3	2.1
The Netherlands	2	1.4
Germany	2	1.4
Australia	1	.7
Finland	1	.7
New Zealand	1	.7
South Africa	1	.7
Sweden	1	.7
Missing	23	15.8
Total	146	100.0
Education		
Degree/Higher Degree	67	45.9
Higher Education Qualification	12	8.2
A level or equivalent	26	17.8
ONC/BTEC or equivalent	5	3.4
GCSE or equivalent (at 16 years)	15	10.3
No formal qualifications	9	6.2
Other	5	3.4
Missing	7	4.8
Total	146	100.0
Occupation		
Employer or manager	10	6.8
Professional worker	30	20.5
Non-manual worker	5	3.4
Skilled/Semi-skilled manual worker	4	2.7
Unskilled manual worker	1	.7
Self-employed	16	11.0
Unemployed	7	4.8
Homemaker/Housewife	6	4.1
Student	36	24.7
Other	24	16.4
Missing	7	4.8
Total	146	100.0

5.7.4 Outliers and Assumption of Normality

A visual examination of the histograms revealed evidence that some of the variables did not have a normal distribution. Some variables produced data that was more noticeably skewed but with no outliers, as shown by the frequency of the scores for ‘Father Rejection’ and ‘Mother Rejection’ being positively skewed at the lower end of the scale (Figure. 5.1). Meanwhile, ‘Compassion for others’, for example, was represented by a standard bell curve with a distinct

outlier, and the frequency of the scores exhibited negative skewness (Figure.5.2). The distributions varied in their degree of kurtosis, with the curves for ‘Father Rejection’ and ‘Mother Rejection’ being markedly flatter.

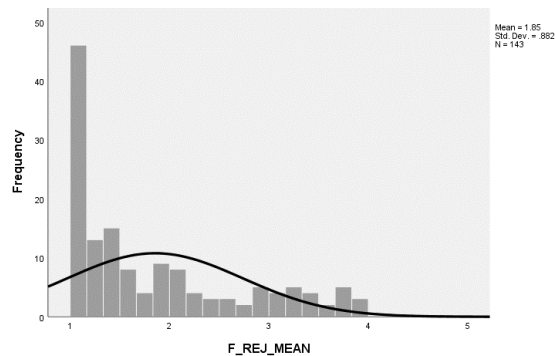


Figure 5.1: Histogram showing the distribution of Father Rejection.

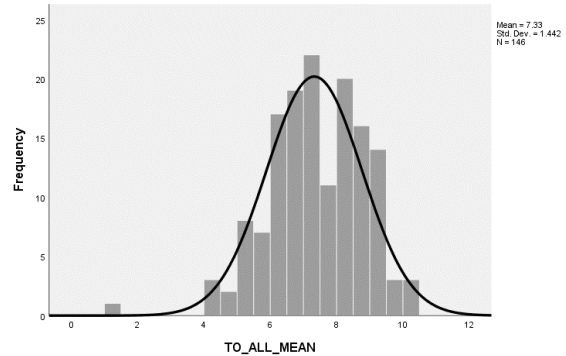


Figure 5.2: Histogram showing the distribution of compassion for others (total).

A visual examination of the boxplots for each of the scales with histograms that were skewed showed that seven of the variables had outliers. However, there was little difference between the 5% trimmed mean and original mean for each variable and, therefore, it was assumed that any scores at the more extreme end of the scale do not have a strong influence on the mean. The z-scores for skewness and kurtosis were also calculated; these values are expected to fall between -1.96 and +1.96 for a normal distribution.

The z-value was obtained by dividing the skewness or kurtosis skewness by its standard error. According to the Shapiro-Wilks test (see Table 5.2), the variables with a value of $p < .001$, indicate a violation of the assumption of normality, possibly due to the sample size of the dataset, i.e. if the sample size is large, it is more likely to identify a statistically significant deviation from normality. The results of the statistical testing of the data for skewness often show differences with the degree of skewness in the histogram if the sample size is large. Therefore, if the z-score is more than $-/+ 1.96$ and the histogram looks skewed, then an assumption of non-normally distributed data can be made.

Table 5.2: Results of Variables for Normal Distribution

	Mean (Std.E)	Standard Deviation	Skewness (<i>z value</i>)	Kurtosis (<i>z value</i>)	Shapiro- Wilks Sig.
Father Rejection	1.85(.074)	.882	.947 (4.67)	-.381(-.95)	.000
Father Emotional Warmth	2.54(.070)	.842	.019 (.09)	-.962 (-2.39)	.001
Father Overprotection	2.16(.050)	.595	.184 (.91)	-.597 (-1.48)	.006
Mother Rejection	1.78(.065)	.783	.903 (4.49)	-.258 (-.65)	.000
Mother Emotional Warmth	2.79(.065)	.784	-.319 (-1.94)	-.706 (-1.77)	.002
Mother Overprotection	2.29(.047)	.562	.156 (0.78)	.164 (.41)	.340
Self-compassion	6.37(.121)	1.459	.017 (.20)	.229 (.69)	.192
Compassion for others	7.33(.119)	1.442	-.585(-2.91)	.950(2.97)	.005
Compassion from others	6.38(.128)	1.539	-.014(-.01)	-.167(-.42)	.889
Attachment Anxiety	2.93(.099)	1.187	.058(.29)	-1.123(-2.79)	.000
Attachment Avoidance	3.27(.095)	1.140	.470(2.32)	-.230(-.57)	.004
Social connectedness	4.15(.075)	.909	-.360(-1.79)	.198(.58)	.163

* This is a lower bound of the true significance

5.7.4.1 The s-EMBU Scale Assumption of Normality of Data

With regard to the subscales of the s-EMBU, maternal emotional warmth was within the range for kurtosis (z -value=-1.77), but the value for kurtosis in relation to paternal emotional warmth was just outside the normal range (z -value=-2.39). Paternal and maternal overprotection were within the normal range for skewness and kurtosis. Both paternal and maternal rejection were both within the normal range for kurtosis. In terms of skewness, both were extreme, with the scores for paternal rejection (z -value= 4.67) and maternal rejection (z -value= 4.49) both being positively skewed and not normally distributed. The Shapiro-Wilks test showed that these three parental behaviour scales (father emotional warmth, father rejection and mother rejection) all had significantly non-normal distributions. The Q-Q plot for father rejection produced an ‘S’ curve-shaped which departed from the line, indicating skewness. Meanwhile, the Q-Q plot for mother rejection also departed from the line with the dots sagging away both above and below

it. With regard to father emotional warmth, most of the data was on the line with the dots showing only a little deviation from it. Therefore, it can be concluded that these three subscales (paternal and maternal emotional warmth, overprotection and rejection) are not normally distributed.

5.7.4.2 The Compassion Engagement and Action Scales (CEAS) Assumption of Normality of the Data

Within the CEAS scale, there was one variable which produced data outside the acceptable z-value range of -1.96 and +1.96 for a normal distribution for both Skewness and Kurtosis, namely compassion for others (Skewness=-2.91; Kurtosis = 2.97). Compassion for others was also the variable identified by the Shapiro-Wilks test as having a statistically significant deviation from normality, due to the value being less than 0.05.

The histogram data for compassion for others were plotted and revealed negative skewness, but a positive skew for some outliers. The boxplots for each variable showed that although there were outliers (N=3), they were still within the defined ranges required by SPSS not to be deemed extreme outliers, and therefore these cases were retained. The Q-Q plots for these variables were slightly different, with the variable compassion for others hardly deviating from the line (except for the retained outlier), thus indicating there were no major problems with the kurtosis. The self-compassion variable deviated from the line at the positive end of the distribution, sagging above and below it, indicating positive skewness. In conclusion, compassion for others was not normally distributed.

5.7.4.3 The ECR-R Scale Assumption of Normality of the Data

With regard to the ECR-R, the Attachment Anxiety subscale had a kurtosis z-value of above 1.96, but skewness was within the normal range. However, the Attachment Avoidance subscale had a skewness value outside the normal range but the kurtosis z-value was within the normal range. The Shapiro-Wilks results were significant for both attachment anxiety and avoidance, with a visual examination of the histogram for anxiety and avoidance revealing a heavy tailing at the lower end of the scale. The Q-Q plots for both variables indicated a slight 'S-shaped' curve around the line, sagging above and below it at both ends of the scale, which was supported by the histogram. Both attachment anxiety and avoidance were not normally distributed.

5.7.4.4 The Social Connectedness Scale Assumption of Normality of the Data

The z-values for kurtosis and skewness of the Social Connectedness scales met the assumption of a normal distribution. The histogram was visually examined and found to be slightly negatively skewed with a positive outlier. This was borne out by the box plot, which showed two outliers. The Q-Q plot showed the data drifting away from the line at both tails. The 5% trimmed mean and mean scores for the outliers were examined to see how close they were, and it was decided to retain them because they were very similar in value. Therefore, social connectedness was considered to be normally distributed.

5.7.5 Transformation of the Data

Some of the data did not fall within the acceptable range for skewness and kurtosis, which means that assumptions for the parametric test had not been met (paternal and maternal rejection, paternal emotional warmth, compassion for others and attachment anxiety and avoidance). As explained in the previous chapter (Chapter Four), the skewed data were

transformed using an appropriate transformation method that represented the shape of the skew, as recommended by Pallant (2013). For example, compassion for others was transformed using the SQRT-reflect and square root transformation. This was done in order to ascertain whether these transformations would improve the distributions. Although the data statistically improved, the transformed data still looked as skewed as the raw data. Therefore, it was decided that the data should remain untransformed for the study.

5.8 Descriptive Data for Scales

5.8.1 *Central Tendency*

Table 5.3, below, shows the descriptive data for each scale and subscale. The central tendency was computed and summarised to obtain the mean value for each of the scales. However, due to some of the data being non-normally distributed, the mean values could be distorted and thus may not be representative of the data. The median is therefore a more appropriate measure to report, as it is not generally influenced by any extreme values (outliers). The scale range is useful in terms of showing the range of respondents' answers rather than the range of scoring. The median for the perceived parenting behaviour scale showed that the scores for both father rejection and mother rejection were more towards the lower end of the scale than the other variables; and for the attachment scale, the median scores were relatively central within the range used in the scales. The mean for social connectedness was at the higher end of the scale. A higher score on the social connectedness scale indicates a stronger sense of social connectedness.

5.8.2 *Internal Consistency*

The internal consistency (Cronbach's alpha) determined the reliability of the measure and was calculated for each of the scales used in this study (Table 5.3). The coefficients of all the

variables in Table 5.3 were above .76, which meant that all the variables had a very good level of reliability (Field, 2013). To simplify the mediation analysis, only the three orientations of compassion (self-compassion, compassion for others and from others) were used rather than their action and engagement subscales.

Table 5.3. Descriptive data for the scales and subscales

Variables	N	Mean (SE)	Median	Sample Scale Range	SD	Alpha
Father's Rejection	143	1.85 (.074)	1.43	1-4	.882	.93
Father's Emotional Warmth	143	2.54 (.070)	2.50	1-4	.842	.90
Father's Overprotection	143	2.16 (.050)	2.11	1-4	.595	.76
Mother's Rejection	145	1.78 (.065)	1.43	1-4	.783	.92
Mother's Emotional Warmth	146	2.79 (.065)	2.83	1-4	.784	.88
Mother's Overprotection	145	2.29 (.047)	2.33	1-4	.562	.78
Compassion Self (Total)	146	6.37 (.121)	6.30	2-10	1.459	.78
Compassion For Others (Total)	146	7.33 (.119)	7.30	1-10	1.44	.92
Compassion From Others (Total)	145	6.38 (.128)	6.30	2-10	1.539	.94
Anxious Attachment	143	2.93 (.099)	3.06	1-6	1.187	.93
Avoidant Attachment	143	3.27 (.095)	3.28	1-7	1.140	.94
Social Connectedness (Total)	145	4.15 (.075)	4.15	1-6	.909	.93

5.9 Research Questions

5.9.1 Research Question One: Is Compassion Related to Perceived Paternal and Maternal Behaviour?

In general, the orientations of compassion correlated with perceived parenting behaviours. However, this was not uniform across all types of compassion and parenting variables. The first aim relates to the association between parental behaviour during childhood and the compassion orientations. Paternal and maternal behaviour were investigated separately, and the findings for the sample examined in this study are presented in Table 5.4. The three orientations of compassion were not normally distributed, so a Spearman's (*rho*) correlation test was conducted. The orientation of self-compassion indicated a positive correlation with paternal

and maternal emotional warmth. The relationships between paternal and maternal rejection and overprotection were all found to be negatively correlated.

Table 5.4 Correlations for Perceived Parenting and The Three Orientations of Compassion.

	<i>Compassion (self)</i>	<i>Compassion (to others)</i>	<i>Compassion (from others)</i>
<i>s-EMBU Paternal Emotional Warmth</i>	.178*	.158	.201*
<i>s-EMBU Maternal Emotional Warmth</i>	.259**	.179*	.255**
<i>s-EMBU Paternal Rejection</i>	-.399**	-.373**	-.168*
<i>s-EMBU Maternal Rejection</i>	-.370**	-.278**	-.167*
<i>s-EMBU Paternal Overprotection</i>	-.253**	-.289**	-.116
<i>s-EMBU Maternal Overprotection</i>	-.236**	-.127	-.097

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

With regard to the orientation of compassion for others, paternal and maternal emotional warmth were positively correlated, but only maternal emotional warmth was statistically significant. Paternal and maternal rejection and overprotection were negatively associated with compassion for others, but only maternal overprotection was non-significantly correlated. This indicates that paternal and maternal rejection and paternal overprotection in childhood are negatively associated with compassion for others. Consequently, those with mothers who they perceived to be emotionally warm had higher levels of compassion for others. However, those who had experienced paternal and maternal overprotection had lower levels of compassion for others. Finally, the orientation of compassion from others was again positively and significantly correlated with parental emotional warmth, but negatively correlated with parental rejection and parental overprotection. Only parental overprotection did not correlate statistically significantly with compassion from others. Therefore, if an individual perceives their parenting as emotionally warm, they are more likely to report receiving compassion from others. If an

individual feels that their parents rejected them in childhood, they are less likely to report receiving compassion from others.

5.9.2 Research Question Two: Is Adult Attachment Related to Perceived Paternal and Maternal Behaviour?

The results of the correlations between perceived parenting behaviours and adult attachment are shown in Table 5.5, below. There were differences in the correlations for this second dataset. All the parenting behaviours correlated with anxiety, and parental emotional warmth and rejection correlated with attachment avoidance. The strength of these relationships was also greater than for the first dataset.

Table 5.5. Correlations between Parenting and Adult Attachment

	Anxiety	Avoidance
<i>s-EMBU Paternal Emotional Warmth</i>	-.197*	-.214*
<i>s-EMBU Maternal Emotional Warmth</i>	-.225**	-.205*
<i>s-EMBU Paternal Rejection</i>	.351**	.245**
<i>s-EMBU Maternal Rejection</i>	.412**	.253**
<i>s-EMBU Paternal Overprotection</i>	.168*	.110
<i>s-EMBU Maternal Overprotection</i>	.274**	.142

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

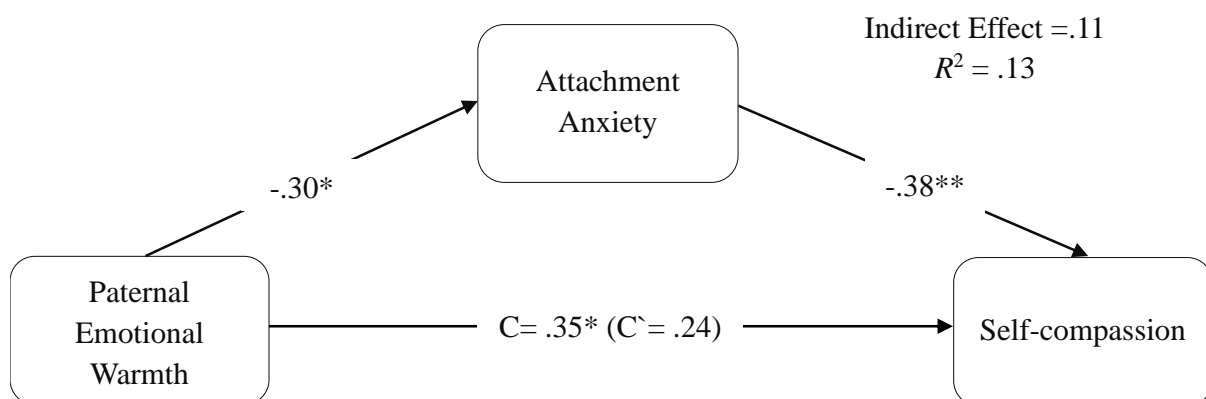
5.9.3 Research Question Three: Does Adult Attachment Mediate the Relationship Between Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Adult Attachment?

Consistent with the approach taken in Chapter Four, only the parenting styles that correlated with the relevant compassion subscale (see Table 5.4) were analysed to discover whether adult attachment anxiety and avoidance had a mediatory effect. The *b*-value represents the regression coefficient, and the 95% Confidence Interval (CI) for the indirect effect is a BCa bootstrapped

CI based on 5,000 samples. The range of the CI values supports the argument that there is a mediating effect when it does not include zero, while the R^2 values explain the proportion of the variance explained by the indirect effect.

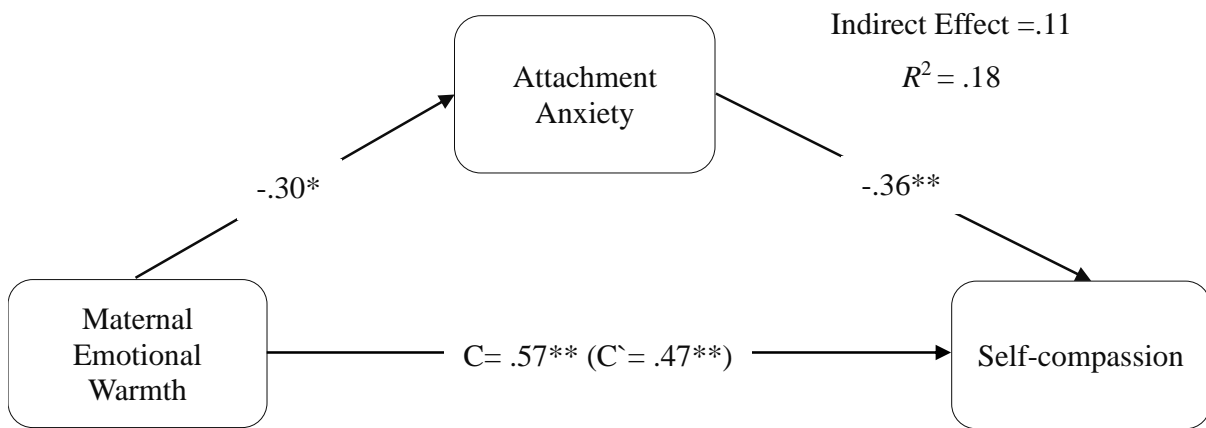
5.9.3.1 Does Adult Attachment Mediate the Relationship Between Parenting Received in Childhood and Compassion Self-Compassion?

There was no statistically significant association between paternal and maternal rejection, overprotection, emotional warmth and self-compassion when they were mediated with attachment avoidance. However, paternal emotional warmth had a significant effect on self-compassion when mediated through attachment anxiety ($ab=.11$, BCa CI [.019, .243]) (Figure 5.2). The direct effect was shown to be non-significant after mediation, and this indicated that full mediation had occurred. Maternal emotional warmth had a significant indirect effect on self-compassion through attachment anxiety after mediation ($ab=.11$, BCa CI [.013, .240]) (see Figure 5.3). However, the direct effect remained significant after mediation, which indicates partial mediation. When mediated by attachment anxiety, the amount of variance explained by the relationship between paternal emotional warmth and self-compassion was 13% ($R^2 = .13$), while maternal emotional warmth accounted for 18% ($R^2 = .18$) of the variance.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

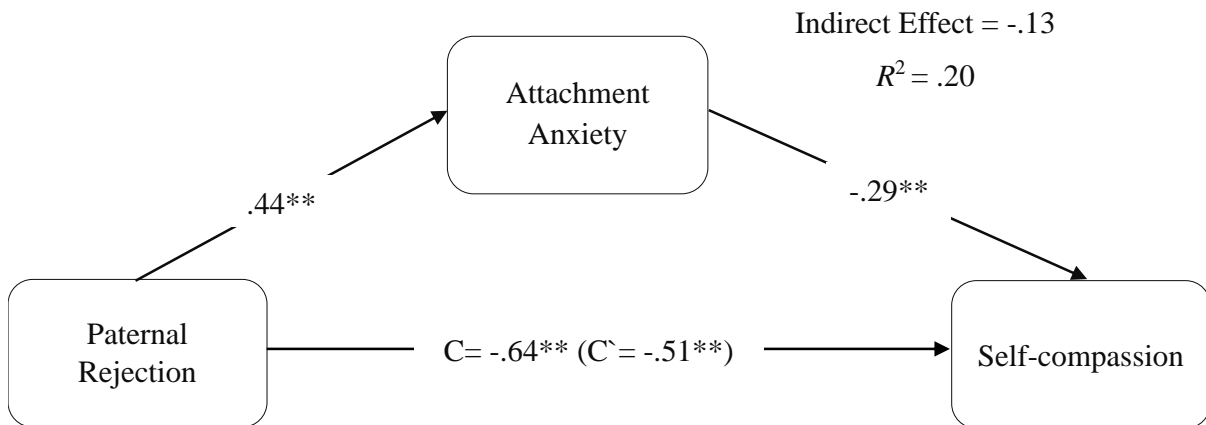
Figure 5.3 Paternal Emotional Warmth predicts Self-Compassion when mediated by Attachment Anxiety



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

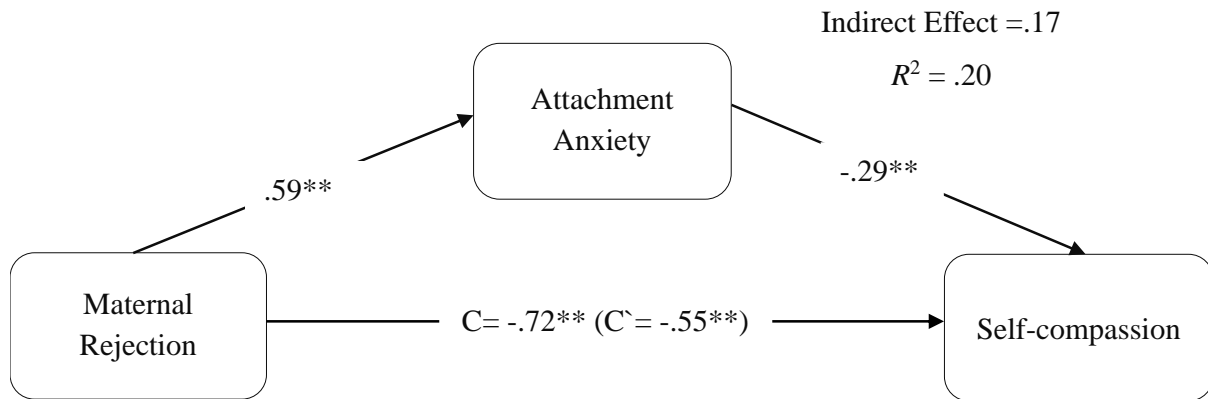
Figure 5.4. Maternal Emotional Warmth Predicts Self-Compassion when Partially Mediated by Attachment Anxiety.

Both paternal and maternal rejection had a negative significant indirect effect on self-compassion when mediated with attachment anxiety. The indirect effects of both models remained significant in the case of partial mediation (see Figures 5.4. & 5.5.). When the effects of paternal rejection and maternal rejection on self-compassion were mediated by attachment anxiety, this accounted for 20% ($R^2 = .20$) of the variance.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

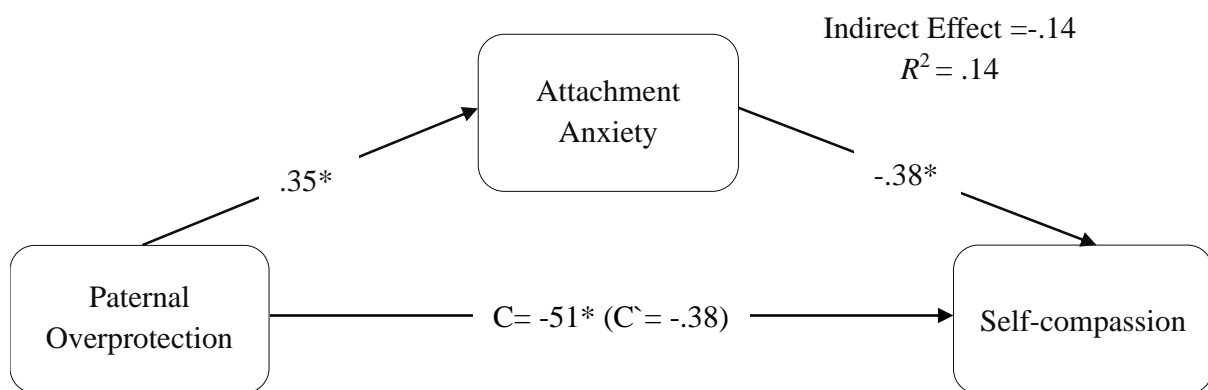
Figure 5.5. Paternal Rejection Predicts Self-Compassion when Partially Mediated by Attachment Anxiety.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

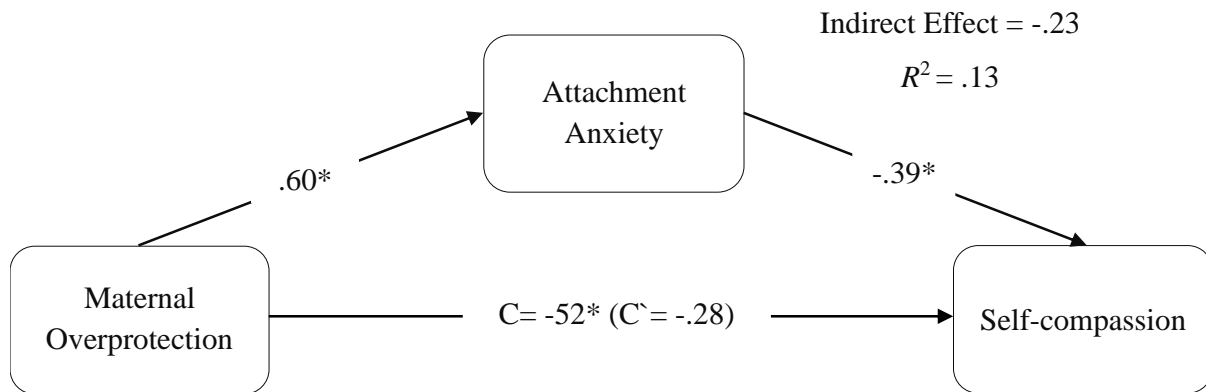
Figure 5.6. Maternal Rejection predicts Self-Compassion when partially mediated by Attachment Anxiety.

In the case of parental overprotection, the effects of both paternal and maternal overprotection on self-compassion were fully mediated by attachment anxiety (see Figures 5.6. & 5.7). The direct effect was not statistically significant after mediation. Paternal overprotection had a negative and significant indirect effect ($ab = -.14$, BCa CI [-.296, -.013]). The variance in relation to self-compassion was 14% ($R^2 = 14$). Maternal overprotection had the strongest negative indirect effect ($ab = -.23$, BCa CI [-.454, -.074]) on self-compassion and a variance of 13% ($R^2 = 13$).



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.7. Paternal Overprotection Predicts Self-Compassion when Partially Mediated by Attachment Anxiety.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.8. Maternal Overprotection Predicts Self-Compassion when Partially Mediated by Attachment Anxiety.

5.9.3.2 Does Attachment Mediate the Relationship Between Parenting Received in Childhood and Compassion for Others?

Paternal emotional warmth and maternal overprotection were not analysed due to there being no statistically significant association in regard to them. The remaining perceived parenting variables (maternal emotional warmth, paternal overprotection, father rejection and mother rejection) were analysed, and interestingly, none had a significant indirect effect when mediated with attachment anxiety or avoidance. Therefore, for this sample, adult attachment did not have a mediatory effect on the relationship between perceived parenting and compassion for others.

5.9.3.3 Does Attachment Mediate the Relationship Between Parenting Received in Childhood and Compassion from Others?

Parental overprotection did not have a significant bivariate correlation with compassion for others and so no analysis was run. Parental rejection and emotional warmth were analysed, and in both cases, attachment anxiety and avoidance did not mediate the relationships with compassion from others. Therefore, for this sample, adult attachment had no mediatory effect on the relationship between perceived parenting and compassion from others.

Table 5.6 below, shows the results of the mediation analyses where adult attachment was the mediator.

Table 5.6 Results for the Mediation Analyses of Retrospective Parenting and Compassion for self, for others, and from others via Adult Attachment

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients			Indirect Effect					
			Effect of IV on M (a)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	95% CI [Lower,Upper]	R ²	Findings	
Paternal E Warmth →	Anxiety →	Compassion (Self)	-.30*	-.38**	.35*	.24	.11	.06	[.02, .25]	.13	significant, full mediation
Paternal E Warmth →	Avoidance →	Compassion (Self)	.26*	-.19	.35*	.31*	.05	.04	[-.01, .15]	.06	non-significant mediation
Maternal E Warmth →	Anxiety →	Compassion (Self)	-.30*	-.36**	.57**	.47**	.11	.06	[.02, .24]	.18	significant, partial mediation
Maternal E Warmth →	Avoidance →	Compassion (Self)	-.22	-.18	.57**	.53**	.04	.04	[-.02, .14]	.11	non-significant mediation
Paternal Rejection →	Anxiety →	Compassion (Self)	.44**	-.29**	-.64**	-.51**	-.13	.06	[-.26, -.03]	.20	significant, partial mediation
Paternal Rejection →	Avoidance →	Compassion (Self)	.20	-.16	-.64**	-.61**	-.03	.03	[-.10, .01]	.16	non-significant mediation
Maternal Rejection →	Anxiety →	Compassion (Self)	.59**	-.29**	-.72**	-.55**	-.17	.08	[-.34, -.04]	.20	significant, partial mediation
Maternal Rejection →	Avoidance →	Compassion (Self)	.32**	-.13	-.72**	-.67**	-.04	.04	[-.13, .03]	.16	non-significant mediation
Paternal Overpro. →	Anxiety →	Compassion (Self)	.35*	-.38**	-.51**	-.38	-.14	.07	[-.29, -.01]	.14	significant, full mediation
Maternal Overpro. →	Anxiety →	Compassion (Self)	.60**	-.39**	-.52*	-.28	-.23	.10	[-.46, -.08]	.13	significant, full mediation
Maternal Rejection →	Anxiety →	Compassion (for others)	.59**	-.15	-.31*	-.22	-.09	.07	[-.24, .04]	.04	non-significant mediation
Maternal Rejection →	Avoidance →	Compassion (for others)	.32**	-.26*	-.31*	-.22	-.08	.05	[-.19, -.00]	.07	significant, full mediation
Paternal Rejection →	Anxiety →	Compassion (for others)	.44**	-.08	-.53**	-.49**	-.04	.05	[-.14, .04]	.11	non-significant mediation
Paternal Rejection →	Avoidance →	Compassion (for others)	.20	-.23*	-.53**	-.48**	-.05	.03	[-.12, .01]	.14	non-significant mediation
Paternal E Warmth →	Anxiety →	Compassion (from others)	-.30*	-.17	.38*	.32*	.05	.05	[-.01, .17]	.06	non-significant mediation
Paternal E Warmth →	Avoidance →	Compassion (from others)	-.26*	-.33**	.38*	.29	.09	.06	[.00, .22]	.10	significant, full mediation
Maternal E Warmth →	Anxiety →	Compassion (from others)	-.26*	-.33**	.38*	.29	.09	.06	[.04, .40]	.10	significant, full mediation
Maternal E Warmth →	Avoidance →	Compassion (from others)	-.30*	-.16	.41*	.36*	.05	.05	[-.02, .16]	.06	non-significant mediation
Paternal Rejection →	Anxiety →	Compassion (from others)	-.22	-.35**	.41*	.34*	.10	.06	[-.02, .22]	.11	non-significant mediation
Paternal Rejection →	Avoidance →	Compassion (from others)	.44**	-.20	-.18	-.09	-.09	.07	[-.23, .03]	.03	non-significant mediation
Maternal Rejection →	Anxiety →	Compassion (from others)	.20	-.36**	-.18	-.11	-.07	.05	[-.19, .00]	.08	non-significant mediation
Maternal Rejection →	Avoidance →	Compassion (from others)	.59**	-.16	-.31	-.22	-.10	.09	[-.29, .05]	.04	non-significant mediation
Maternal Rejection →	Avoidance →	Compassion (from others)	.32**	-.36**	-.32	-.20	-.11	.06	[-.26, -.01]	.09	significant, full mediation

p value = *p < .05, **p < .01
 E Warmth = Emotional Warmth; Overpro: Overprotection; Soc.Connectedness = Social Connectedness; Anxiety = Adult Attachment Anxiety; Avoidance = Adult Attachment Avoidance.
 SE = Standard Error, CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M: Mediator = Adult Attachment; DV = Dependent Variable (Compassion)

5.9.4 Research Question Four: Is Social Connectedness Related to Perceived Paternal and Maternal Behaviour?

This research question investigated the relationship between perceived parenting behaviour and social connectedness. All but one of the parenting styles significantly correlated with social connectedness. Paternal overprotection was the only perceived parenting style that did not correlate. These correlations were consistent with those between perceived parenting behaviours and social connectedness shown in Table 5.7.

Table 5.7 Correlations for Perceived Parenting and Social Connectedness

	<i>Social Connectedness</i>
<i>s-EMBU Paternal Emotional Warmth</i>	.300**
<i>s-EMBU Maternal Emotional Warmth</i>	.357**
<i>s-EMBU Paternal Rejection</i>	-.345**
<i>s-EMBU Maternal Rejection</i>	.389**
<i>s-EMBU Paternal Overprotection</i>	-.109
<i>s-EMBU Maternal Overprotection</i>	-.231**

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

5.9.5 Research Question Five: Does Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour, where there is an Association Between Compassion and Social Connectedness?

Again, the analysis was only run where there was a statistically significant association between perceived parenting and the three orientations of compassion to establish whether social connectedness has a mediatory effect. The results obtained are described in the following sections.

5.9.5.1 Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Self-Compassion?

All the subscales measuring participants' perceptions of parenting had a statistically significant relationship with self-compassion. However, when social connectedness was included in the model, paternal overprotection did not have a significant indirect effect on self-compassion, indicating that social connectedness did not mediate the relationship.

Maternal overprotection had a significant indirect effect on self-compassion when mediated through social connectedness ($ab = -.28$, BCa CI $[-.48, -.08]$) (Figure 5.9), and the effect size was large ($-.29$ sig.) When the effect of maternal overprotection on self-compassion was mediated via social connectedness, there appeared to be full mediation as the direct effect diminished and became non-significant. When mediated via social connectedness, the effect of maternal overprotection on self-compassion accounted for 23% of the variance in self-compassion.

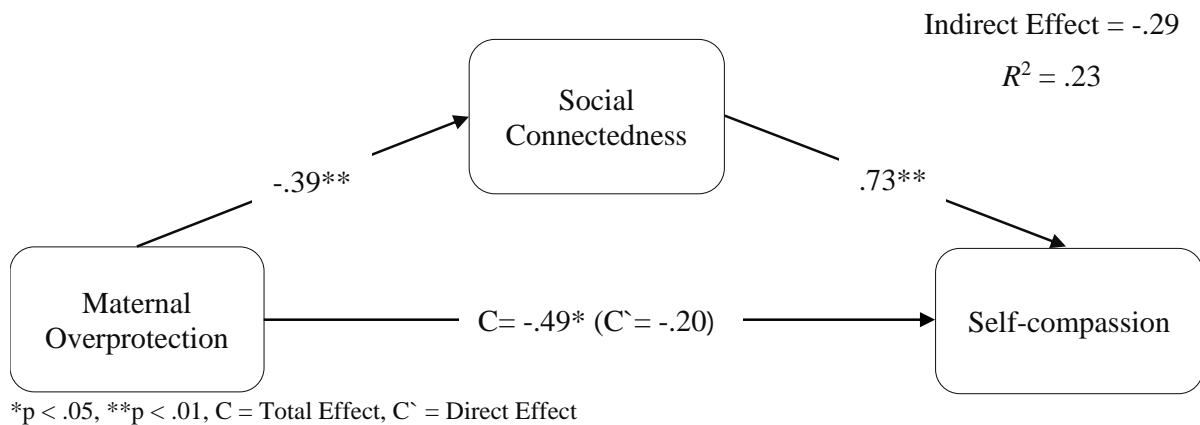
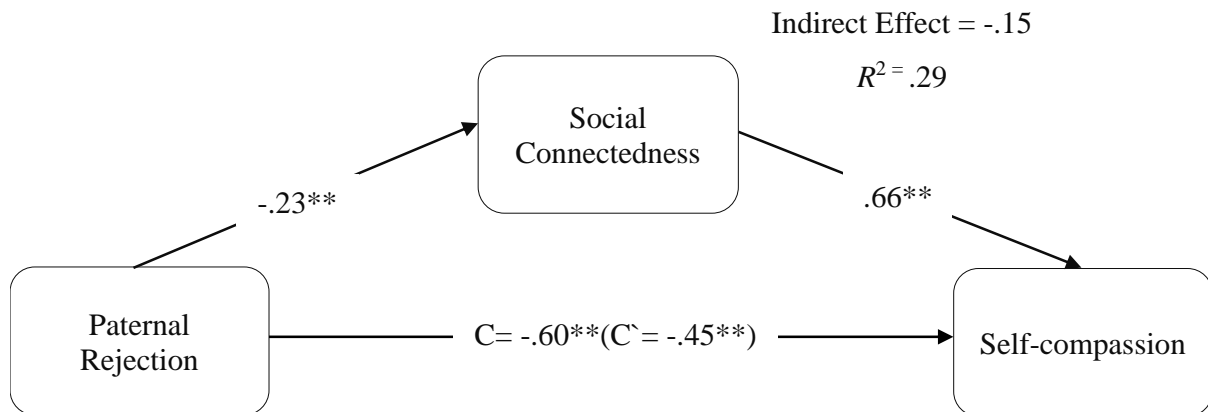


Figure 5.9. Maternal Overprotection Predicts Self-Compassion when Mediated by Social Connectedness.

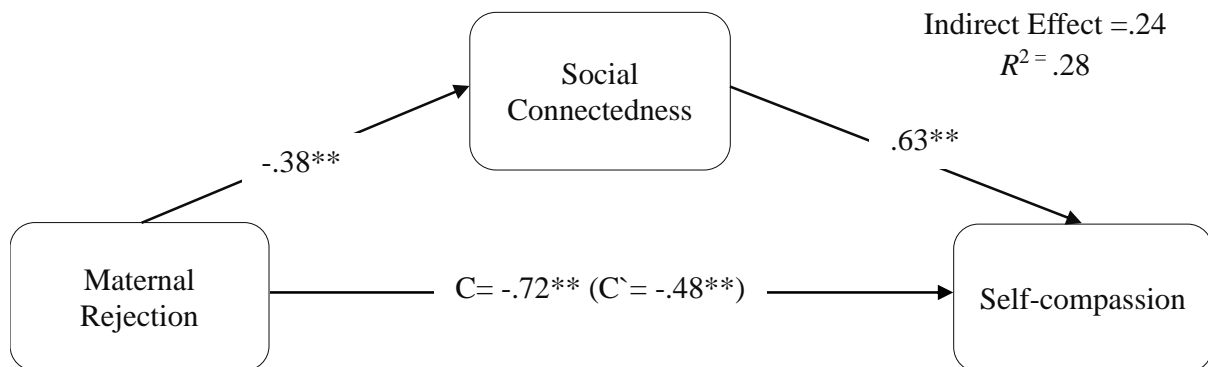
Figure 5.10 and Figure 5.11 show that paternal rejection and maternal rejection have a significant indirect effect on self-compassion when mediated by social connectedness ($ab = -.15$, 95% BCa CI $[-.30, -.05]$; $ab = -.24$, 95% BCa CI $[-.41, -.10]$, respectively) and the effect

size is medium to large. The direct effect remained statistically significant when mediated by social connectedness; thus, partial mediation occurred. The percentage of variance for self-compassion was 29% (paternal) and 28% (maternal). Therefore, if paternal rejection or maternal rejection is high, then social connectedness is lower, which in turn predicts lower levels of compassion for oneself.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.10. Paternal Rejection Predicts Self-Compassion when Mediated by Social Connectedness.

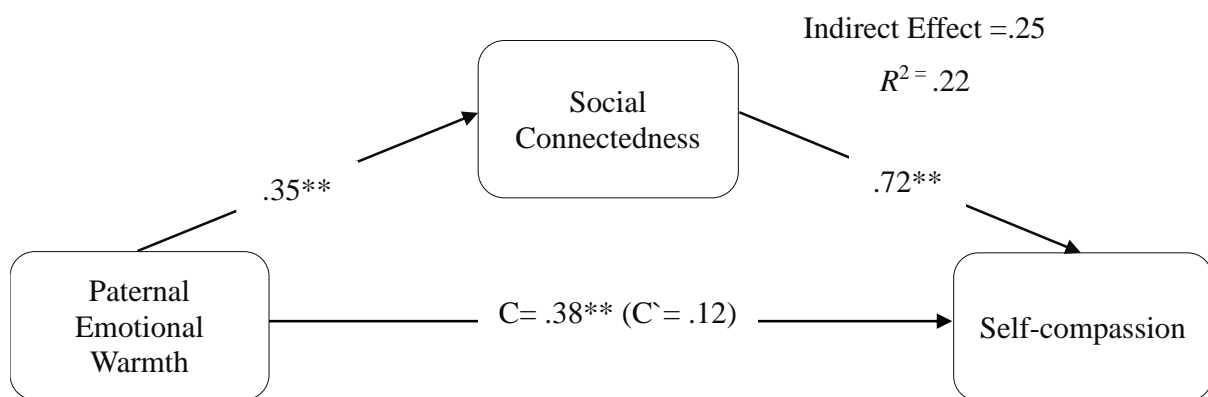


* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.11. Maternal Rejection predicts Self-Compassion when Mediated by Social Connectedness.

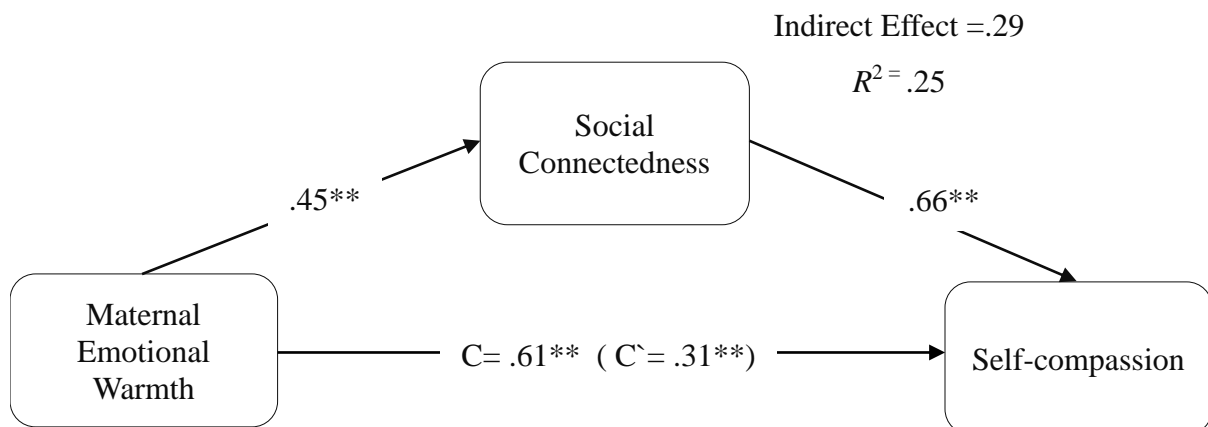
Paternal emotional warmth and maternal emotional warmth (Figure 5.12 & Figure 5.13) had a statistically significant indirect effect on self-compassion when mediated by social connectedness ($ab = .25$, 95% BCa CI [.10, .45]; $ab = .29$, 95% BCa CI [.14, .49], respectively). It was demonstrated that the relationship between paternal emotional warmth and self-

compassion was fully mediated by social connectedness, whereas for maternal emotional warmth the mediation effect was partial. The variance in self-compassion was 22% for the effect of paternal emotional warmth on self-compassion and 25% for the effect of maternal emotional warmth on self-compassion. Therefore, the more paternal or maternal emotional warmth an individual receives, the greater the degree of social connectedness they will feel and this will translate into higher levels of self-compassion.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.12. Paternal Emotional Warmth predicts Self-Compassion when mediated by Social Connectedness.

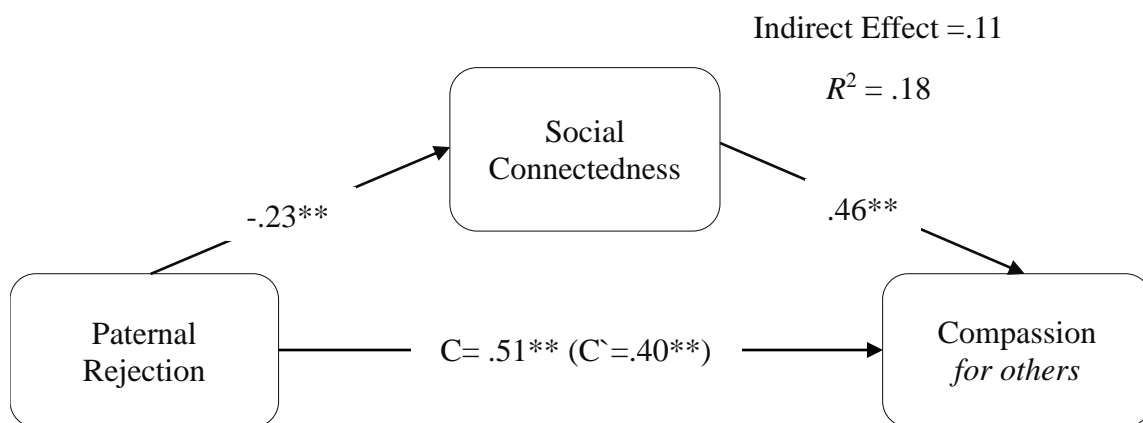


* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.13. Maternal Emotional Warmth Predicts Self-Compassion when Mediated by Social Connectedness.

5.9.5.2 Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Compassion for Others?

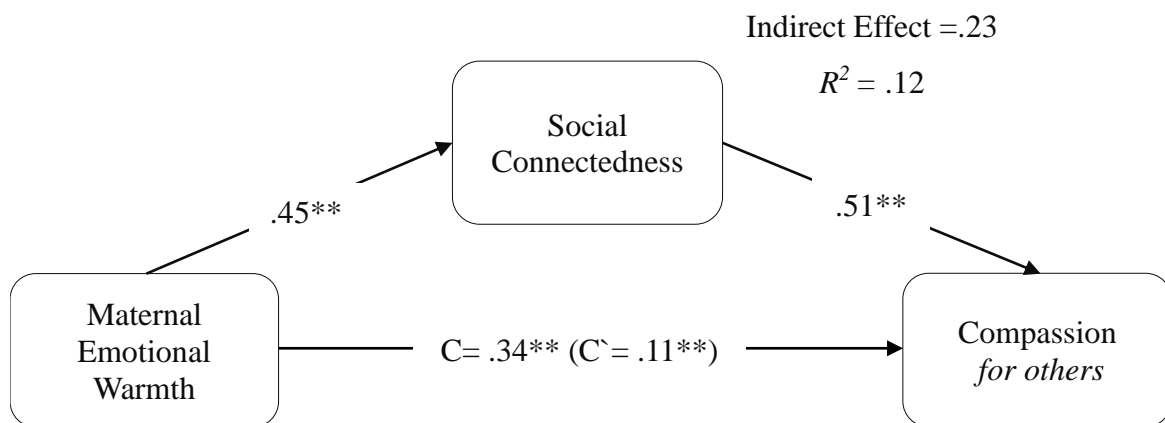
Paternal emotional warmth and maternal overprotection did not have a statistically significant bivariate relationship with compassion for others, so the analysis was not run for these. Paternal overprotection and maternal rejection did not have a significant indirect effect on compassion for others, and so social connectedness did not mediate this relationship. Paternal rejection (but not maternal rejection) had a statistically significant indirect effect on compassion for others through social connectedness ($ab = -.11$, 95% BCa CI $[-.25, -.02]$) (Figure 5.14) and the effect size was medium. As the direct effect remained statistically significant when the relationship between paternal rejection and compassion for others was mediated through social connectedness, it can be concluded that partial mediation occurred. The percentage of variance in compassion for others was 18%. Therefore, the stronger the paternal rejection, the lower the degree of social connectedness the individual will feel, and their level of compassion for others will also be correspondingly lower.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.14. Paternal Rejection Predicts Compassion for Others when Mediated by Social Connectedness.

Maternal emotional warmth (Figure 5.15) was found to have a significant indirect effect on compassion for others when mediated by social connectedness ($ab=.23$, 95% BCa CI [.07, .45]), and the effect size was large. When the effect of maternal emotional warmth on compassion for others was mediated via social connectedness, the direct effect became non-significant, which is indicative of full mediation. When the relationship between maternal emotional warmth and compassion for others was mediated by social connectedness, the variance was 12%. Thus, when maternal emotional warmth is greater, so too is social connectedness and, when social connectedness is greater, an individual feels more compassion for others.



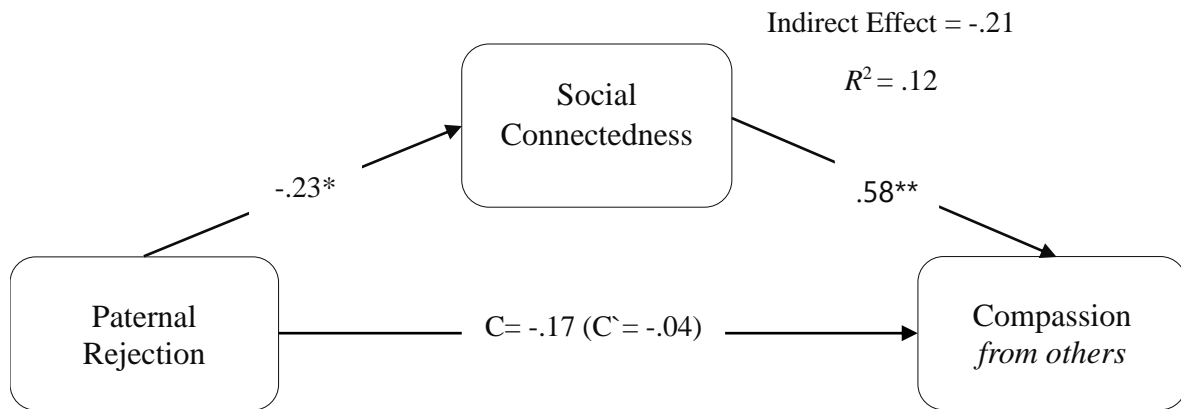
* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.15. Maternal Rejection Predicts Compassion for Others when Mediated by Social Connectedness.

5.9.5.3 Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Compassion from Others?

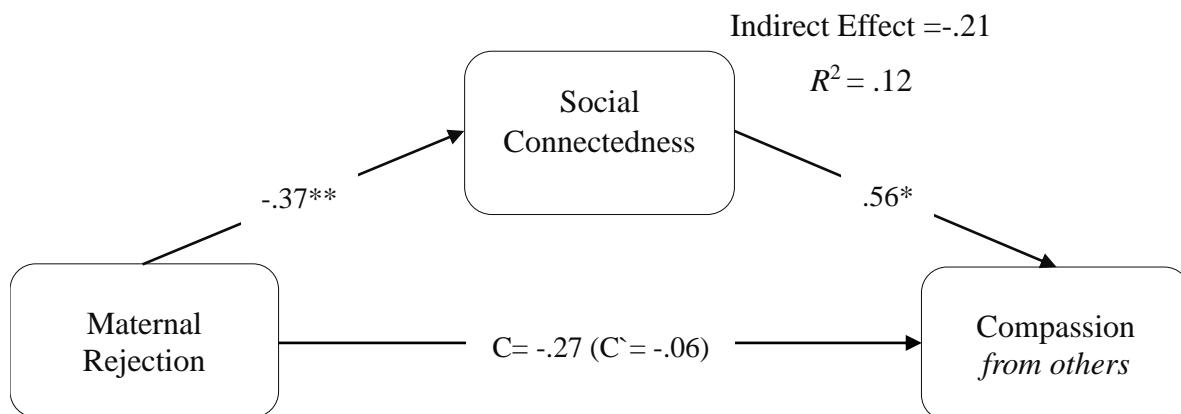
Paternal overprotection was not statistically associated with compassion from others and was therefore not included in the analysis. Although there was a statistically significant association between paternal rejection and maternal rejection and compassion from others (see Table 5.4), the mediation model showed that the total effect was not statistically significant. Nonetheless,

the indirect effect was significant (see Figure 5.16 & Figure 5.17). This demonstrates that there is an indirect effect when social connectedness is included in the model.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.16. Paternal Rejection Predicts Compassion from Others when Mediated by Social Connectedness.

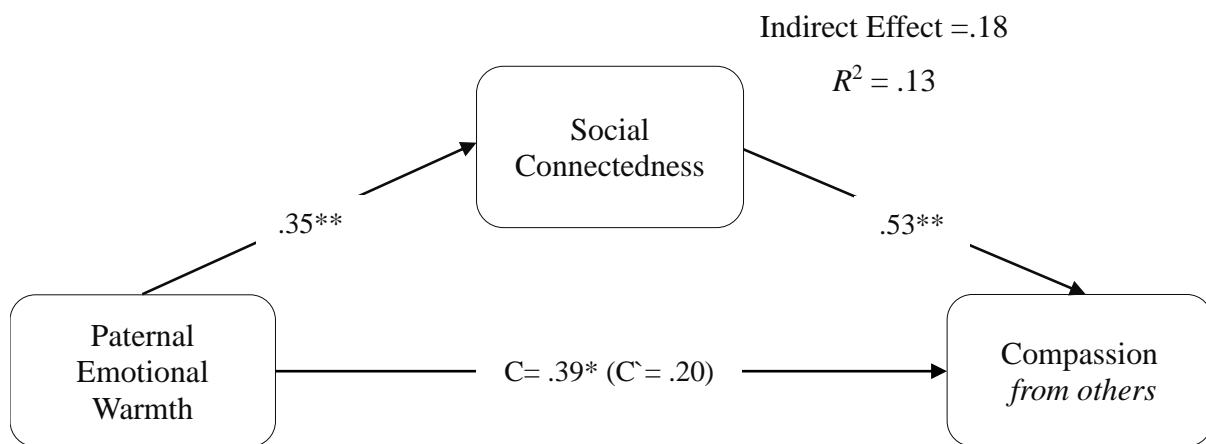


* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.17. Maternal Rejection Predicts Compassion from Others when Mediated by Social Connectedness.

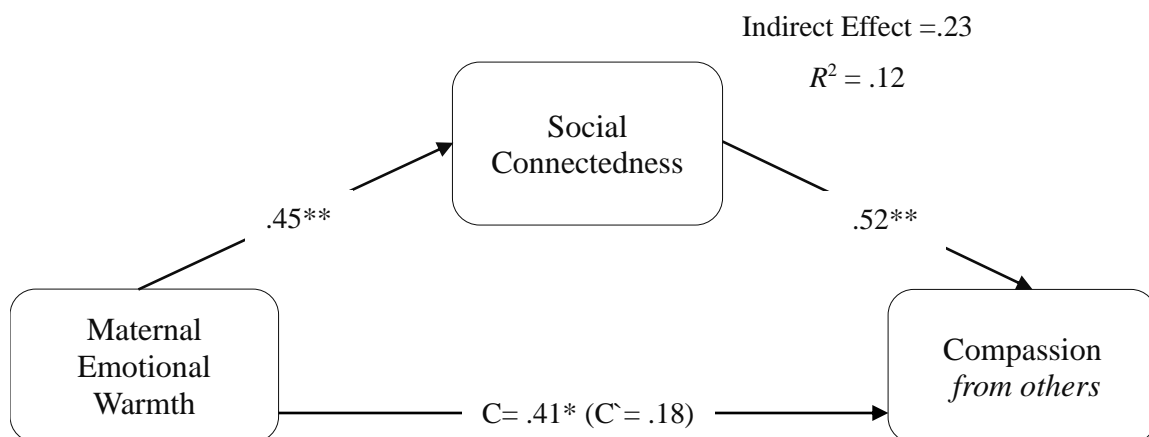
Similarly to the relationship between emotional warmth and compassion for others, both paternal emotional warmth (Figure 5.18) and maternal emotional warmth (Figure 5.19) have a significant indirect effect on compassion from others when mediated by social connectedness ($ab = .18$, 95% BCa CI [.04, .40]; $ab = .23$, 95% BCa CI [.06, .46], respectively), and the effect size is also large. When the relationship between paternal emotional warmth or maternal emotional warmth and compassion from others, is mediated via social connectedness, the direct

effect becomes non-significant, which is again indicative of full mediation. When the relationship between paternal emotional warmth or maternal emotional warmth and compassion from others is mediated with social connectedness, this accounts for 13% and 12% of the variance, respectively. Therefore, when paternal emotional warmth or maternal emotional warmth is greater, the same is true for social connectedness, and the greater the degree of social connectedness, the higher the level of compassion from others.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.18. Paternal Emotional Warmth Predicts Compassion from Others when Mediated by Social Connectedness.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure 5.19. Maternal Emotional Warmth Predicts Compassion from Others when Mediated by Social Connectedness.

Table 5.8 below, shows the results of the mediation analyses where social connectedness was the mediator.

Table 5.8 Results for the Mediation Analyses of Retrospective Parenting and Compassion for self, for others, and from others via Social Connectedness

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients				Indirect Effect				
			Effect of IV on M (a)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	SE	95% CI [Lower, Upper]	R ²	Findings
Paternal E Warmth →	Soc. Connectedness →	Compassion (Self)	.35**	.72**	.38	.12	.25	.09	[.10, .45]	.22	significant, full mediation
Maternal E Warmth →	Soc. Connectedness →	Compassion (Self)	.45**	.66**	.61**	.31*	.29	.09	[.14, .50]	.25	significant, partial mediation
Paternal Rejection →	Soc. Connectedness →	Compassion (Self)	-.23**	.66**	-.60**	-.45**	-.15	.06	[-.29, -.05]	.29	significant, partial mediation
Maternal Rejection →	Soc. Connectedness →	Compassion (Self)	-.38**	.63**	-.71**	-.48**	-.24	.08	[-.41, -.10]	.28	significant, partial mediation
Maternal Overpro. →	Soc. Connectedness →	Compassion (Self)	-.39**	.73**	-.48*	-.20	-.28	.10	[-.49, -.07]	.23	significant, full mediation
Paternal Rejection →	Soc. Connectedness →	Compassion (for others)	-.23**	.46**	-.51**	-.40**	-.11	.06	[-.25, -.02]	.18	significant, partial mediation
Maternal Rejection →	Soc. Connectedness →	Compassion (for others)	-.38**	.52**	-.29	-.09	-.20	.09	[-.39, -.06]	.12	significant, full mediation
Paternal E Warmth →	Soc. Connectedness →	Compassion (from others)	.35**	.53**	.39*	.20	.18	.09	[.00, .22]	.13	significant, full mediation
Maternal E Warmth →	Soc. Connectedness →	Compassion (from others)	.45**	.52**	.42*	.18	.23	.10	[.06, .46]	.12	significant, full mediation
Paternal Rejection →	Soc. Connectedness →	Compassion (from others)	-.23*	.58**	-.17	-.04	-.13	.06	[-.27, -.04]	.12	significant, full mediation
Maternal Rejection →	Soc. Connectedness →	Compassion (from others)	-.37**	.56**	-.27	-.06	-.21	.09	[-.41, -.06]	.12	significant, full mediation

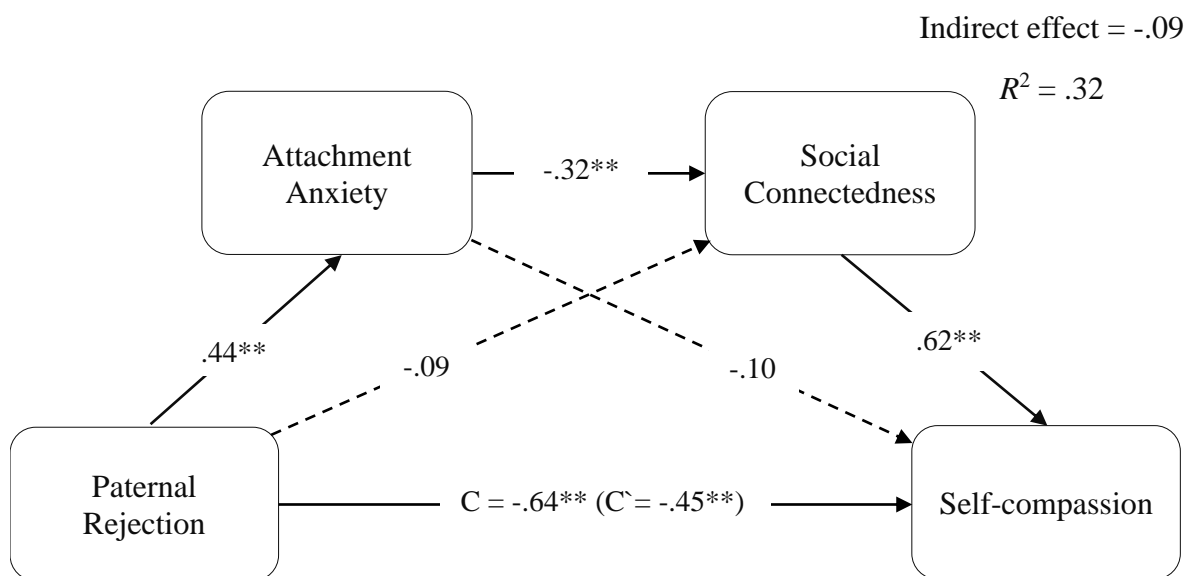
p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Soc. Connectedness = Social Connectedness; SE = Standard Error,

CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M = Mediator = Social Connectedness; DV = Dependent Variable (Compassion)

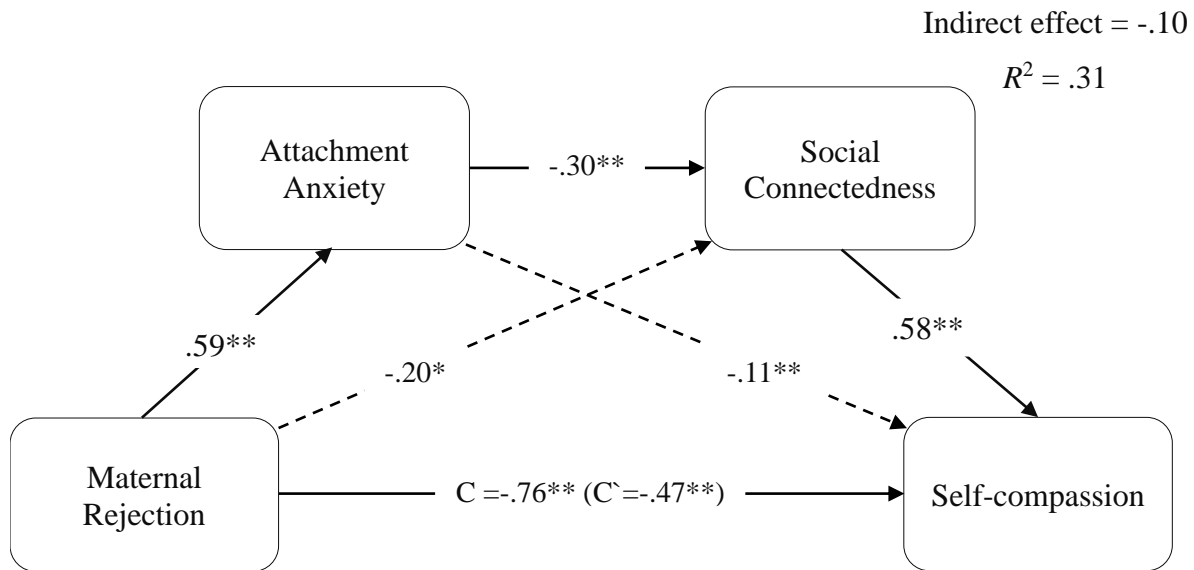
5.9.6 Research Question Six: Does Adult Attachment and Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Adult Attachment and Social Connectedness?

Only the orientation of self-compassion had a relationship with an individual's perceptions of parenting when mediated by attachment anxiety and social connectedness. The two mediation variables (attachment anxiety and social connectedness) and paternal and maternal rejection explained 32% and 31%, respectively, of the variance in self-compassion (Figure 5.20 & 5.21). However, social connectedness had a greater effect size than attachment anxiety. The total significant indirect effect of paternal rejection on self-compassion when mediated by attachment anxiety and then social connectedness was $IE=-.19$, while the total significant indirect effect of maternal rejection was $IE=-.29$. With regard to the variance in self-compassion, it was shown that the serial mediation model had a 3% greater mediatory effect than a single mediation and the direct effect remained significant, which is indicative of partial mediation.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure. 5.20 Paternal Rejection Predicts Self-Compassion when Mediated by Attachment Anxiety and Social Connectedness.



* $p < .05$, ** $p < .01$, C = Total Effect, C' = Direct Effect

Figure. 5.21 Maternal Rejection Predicts Self-Compassion when Mediated by Attachment Anxiety and Social Connectedness.

Paternal and maternal emotional warmth and maternal overprotection produced a variance in self-compassion of between 26% and 28% when mediated by attachment anxiety and social connectedness, which is only slightly more than when just one mediation variable was used. Social connectedness had a greater effect than attachment anxiety in this serial mediation model. There was a significant negative correlation between attachment anxiety and social connectedness, and if social connectedness has a greater effect size, it may also have a stronger influence on self-compassion. Furthermore, it is less clear how attachment anxiety influences social connectedness when it mediates the relationships between parenting behaviour and self-compassion.

Table 5.9 below, shows the results of the serial mediation analyses where adult attachment and social connectedness were the mediators.

Table 5.9 Results for the Mediation Analyses of Retrospective Parenting and Compassion for self, for others, and from others via Adult Attachment & Social Connectedness

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients				Indirect Effect				
			Effect of IV on M (a)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	SE	95% CI [Lower;Upper]	R ²	Findings
Paternal E Warmth →	Anxiety → Soc. Con. →	Compassion (Self)	-.30**	.64**	.37*	.09	.06	.03	[.01, .12]	.26	significant, full mediation
Paternal E Warmth →	Avoidance → Soc. Con →	Compassion (Self)	-.24*	.76**	.37*	.11	.06	.03	[-.00, .12]	.26	non-significant mediation
Maternal E Warmth →	Anxiety → Soc. Con →	Compassion (Self)	-.30*	.57**	.62**	.30*	.05	.03	[.01, .11]	.28	significant, partial mediation
Maternal E Warmth →	Avoidance → Soc. Con →	Compassion (Self)	-.19	.68**	.62**	.31**	.04	.03	[-.02, .10]	.26	non-significant mediation
Paternal Rejection →	Anxiety → Soc. Con →	Compassion (Self)	.44**	.62**	-.64**	-.45**	-.09	.03	[-.16, -.04]	.32	significant, partial mediation
Paternal Rejection →	Avoidance → Soc. Con →	Compassion (Self)	.20	.70**	-.64**	-.49**	-.05	.03	[-.11, -.00]	.32	significant, partial mediation
Maternal Rejection →	Anxiety → Soc. Con →	Compassion (Self)	.59**	.58**	-.76**	-.47**	-.10	.04	[-.19, -.04]	.31	significant, partial mediation
Maternal Rejection →	Avoidance → Soc. Con →	Compassion (Self)	.30*	.66**	-.76**	-.53**	-.06	.03	[-.12, -.01]	.30	significant, partial mediation
Maternal Overpro. →	Anxiety → Soc. Con. →	Compassion (Self)	.60**	.64**	-.53*	-.17	-.12	.05	[-.24, -.04]	.26	significant, full mediation
Paternal Rejection →	Anxiety → Soc. Con →	Compassion (for others)	.44**	.51**	-.53**	-.45**	-.07	.04	[-.15, -.02]	.19	significant, partial mediation
Paternal Rejection →	Avoidance → Soc. Con →	Compassion (for others)	.20	.43**	-.53**	-.41**	-.03	.02	[-.08, .00]	.19	non-significant mediation
Maternal Rejection →	Anxiety → Soc. Con →	Compassion (for others)	.59**	.53**	-.31*	-.12	-.09	.04	[-.20, -.02]	.13	significant, full mediation
Maternal Rejection →	Avoidance → Soc. Con →	Compassion (for others)	.30*	.47**	-.31*	-.10	-.04	.03	[-.10, .00]	.14	non-significant mediation
Paternal E Warmth →	Anxiety → Soc. Con →	Compassion (from others)	-.30*	.55**	.36*	.16	.05	.03	[-.00, .11]	.14	significant, full mediation
Paternal E Warmth →	Avoidance → Soc. Con →	Compassion (from others)	-.24*	.46**	.36*	.15	.03	.03	[.01, .012]	.15	non-significant mediation
Maternal E Warmth →	Anxiety → Soc. Con →	Compassion (from others)	-.30*	.55**	.39*	.14	.05	.03	[.00, .13]	.13	significant, full mediation
Maternal E Warmth →	Avoidance → Soc. Cons →	Compassion (from others)	-.19	.43**	.39*	.15	.03	.03	[-.01, .01]	.15	non-significant mediation
Paternal Rejection →	Anxiety → Soc. Con →	Compassion (from others)	.44**	.59**	-.18	-.04	-.08	.04	[-.17, -.02]	.13	significant, full mediation
Paternal Rejection →	Avoidance → Soc. Con. →	Compassion (from others)	.20	.50**	-.18	-.03	-.03	.03	[-.10, .00]	.15	non-significant mediation
Maternal Rejection →	Anxiety → Soc. Con →	Compassion (from others)	.59**	.57**	-.29	-.08	-.10	.05	[-.21, -.03]	.13	significant, full mediation
Maternal Rejection →	Avoidance → Social Con →	Compassion (from others)	.30*	.47**	-.29	-.05	-.04	.03	[-.12, -.007]	.15	significant, full mediation

p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Overpro: Overprotection; Soc.Con = Social Connectedness; Anxiety = Adult Attachment Anxiety; Avoidance = Adult Attachment Avoidance; SE = Standard Error, CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M1: Mediator 1 = Adult Attachment; M2: Mediator 2 = Social Connectedness; DV = Dependent Variable (Compassion)

5.9.7 Summary of Results

For the sample investigated in this study, there was no association between perceived parenting in childhood and self-compassion, compassion for others and compassion from others when mediated with attachment anxiety or attachment avoidance. However, a significant indirect effect was found on the relationship between perceived parenting in childhood and self-compassion when mediated by attachment anxiety.

Social connectedness mediated the relationship between perceived parenting in childhood and the three orientations of compassion, except in the case of paternal overprotection. With regard to compassion for others, social connectedness only mediated the relationship with paternal and maternal rejection. In terms of compassion from others, social connectedness mediated the relationship with paternal and maternal emotional warmth only. Social connectedness strongly mediated the relationship between perceived parenting in childhood and self-compassion, and did so to a greater extent than attachment anxiety. Serial mediation was conducted for each of the models to discover whether any significant pathways could be identified. The analysis was only run on the models that were mediated by attachment anxiety or by social connectedness; the only dependent variable was self-compassion. Both paternal and maternal rejection and emotional warmth and maternal overprotection were the independent variables that were tested in the analysis. Attachment anxiety and social connectedness were negatively and significantly correlated. For each of the models that were analysed, all had significant indirect effects apart from maternal overprotection. Social connectedness had a stronger mediatory effect on parental emotional warmth and rejection than attachment anxiety according to the models.

5.10 Discussion

5.10.1 Overview

Previous research has demonstrated that there is a link between perceived parenting during childhood and compassion. However, no research to date has examined the relationship between perceived parenting during childhood and the orientations of compassion when mediated by adult attachment, nor the relationship between perceived parenting during childhood and the orientations of compassion when mediated by social connectedness. Additionally, the existing studies that have explored the relationship between compassion and perceived parenting during childhood have mainly used Neff's (2003b) self-compassion model. One purpose of the proposed study was to use a newly published compassion measure to establish whether more information about the association between perceived parenting and compassion could be discovered, using a novel perspective on compassion.

Gilbert et al.'s (2017) orientations of compassion measure not only examines self-compassion but also allows us to investigate other orientations of compassion, such as giving compassion to others and receiving compassion from others. As previously stated, self-compassion, particularly in reference to Neff's self-compassion model, has been the main focus of studies measuring compassion. The main aims of this study were to investigate the relationship between parenting received in childhood and the three orientations of compassion and to explore whether attachment (anxiety and avoidance) and social connectedness are mediators of this association. A summary of the study's findings is presented and discussed in the following sections.

5.10.2 Research Question One: Is Compassion Related to Perceived Paternal and Maternal Behaviour?

This study aimed to establish whether perceived parenting behaviour was related to compassion, self-compassion, and compassion for others and from others. The correlations between some of the perceived parenting behaviours and orientations of compassion showed that there was a significant association between them.

As predicted, the correlations for this sample population showed that parental rejection and overprotection had a negative relationship with compassion, and emotional warmth had a positive association with compassion. In the case of both paternal and maternal overprotection, there was a statistically significant negative correlation with self-compassion, measured using Gilbert et al.'s (2017) self-compassion scale. This demonstrates that, as a poor parenting style, high parental overprotection can affect self-compassion in an individual. No statistically significant association was found for either parent with regard to the relationship between overprotection and self-compassion when using Neff's Self-Compassion Scale, as explained in Chapter Four. However, the findings differed with regard to self-compassion, and this could be because the instruments used to measure compassion were very different. Neff's (2003a) self-compassion measure – the SCS - refers to an individual being supportive towards themselves in times of pain and suffering and is based on social psychology. Gilbert's Compassionate Engagement and Actions is informed by an evolutionary focus on caring motivation and engagement. Both paternal and maternal emotional warmth had a positive and statistically significant correlation with self-compassion, unlike the SCS (Neff, 2003b), which only showed an association with maternal emotional warmth. However, in the case of both self-compassion scales, maternal emotional warmth showed a stronger correlation than paternal emotional warmth. It may be that a mother's influence is stronger due to being the primary

caregiver in the case of most of the participants in this sample population. This supports the idea that if a parent is emotionally warm and nurturing, then it leads to a secure base attachment in childhood and the development of self-compassion. A study by Neff and McGehee (2010) investigated the role of maternal support as a predictor of individual differences in self-compassion and found that maternal support predicted self-compassion. However, they did not investigate whether a father's behaviour played a role in predicting self-compassion.

Both paternal and maternal rejection showed an inverse correlation with self-compassion. Like Neff's (2003b) Self-compassion scale, Gilbert's Self-compassion scale showed the strongest association between perceived rejection from both parents and self-compassion, but maternal rejection had the greater effect. Again, this could be due to the mother being the primary caregiver for most participants in this sample population. In contrast to parental emotional warmth, experiencing parental rejection in childhood means that an individual is less likely to be self-compassionate (Gilbert & Procter, 2006; Neff & McGehee, 2010).

Unlike Neff's (2003b) Self-compassion scale, Gilbert et al.'s (2017) three orientations of compassion can provide a more nuanced understanding of the different flows of compassion. With regard to the association between perceived parenting and feeling compassion for others, there was no significant association between maternal overprotection and giving compassion to others, but there was a significant negative association between paternal overprotection and feeling compassion for others. It may be the case that an overprotective father had more influence on an individual's ability to give compassion to others. No significant correlation was found for either parental overprotection or compassion from others, which suggests that, in this sample population, a parent's overprotection did not have an impact on an individual's ability to receive compassion from others.

The relationship between parental emotional warmth and compassion for others and from others showed a positive association; however, only paternal emotional warmth and compassion for others were not statistically significantly associated. In this sample population, a parent's style of caregiving and nurturing were found to exert an influence on how likely an individual is to give compassion. Receiving compassion from others had a stronger association with a mother's emotional warmth than that of a father.

Finally, parental rejection was significantly and negatively associated with compassion for others and from others. Paternal rejection had a stronger negative correlation than maternal rejection. The directions of these associations were mirrored by the association with the self-compassion orientation. Poor parenting is likely to lead to negative associations with compassion, whether it be for oneself, giving compassion to others or receiving compassion. Downey and Feldman (1996) suggest that those who are sensitive to rejection have working models that lead to an expectation that others will reject them. Therefore, these individuals are more likely to avoid giving and receiving compassion due to fear of rejection. The negative association found in this study may partially support this belief.

5.10.3 Research Question Two: Is Adult Attachment Related to Perceived Paternal and Maternal Behaviour?

This research question aimed to determine whether there was a relationship between perceived parenting behaviours and adult attachment. Attachment anxiety was found to significantly correlate with all the perceived parenting behaviours for both the father and mother. In the case of attachment avoidance, there was a correlation between paternal and maternal rejection and emotional warmth. This supports the idea that individuals with secure attachment exhibit low

anxiety and avoidance, but those who exhibit insecure attachment styles may be likely to display higher anxiety and avoidance patterns (Brennan et al., 1998). However, this is not the case for overprotection. It may be that overprotection is interpreted as a caring and supportive, positive parenting behaviour; alternatively, it could be interpreted as too restrictive (Roo et al., 2021). These two opposing perceptions may add complexity to the association (positively or negatively) with attachment anxiety and avoidance, especially if the instrument used to assess adult attachment (ECR-R) does not measure secure attachment. However, the results do not explain why there was no correlation between paternal and maternal relationships and attachment avoidance.

5.10.4 Research Question Three: Does Attachment Mediate the Relationship Between Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Attachment?

As was the case in the study described in Chapter Four, attachment avoidance did not mediate the relationship with any of the independent variables (parental rejection, overprotection and emotional warmth), or the dependent variables (self-compassion, compassion for others and from others). Several studies have also found there was no association between attachment avoidance and self-compassion (Neff and McGehee, 2010; Pepping et al., 2015; Wei et al., 2011), although one exception was Raque-Bogdan et al.'s (2016) study.

As an insecure adult attachment style, attachment anxiety was negatively associated with self-compassion, which means that in individuals with high attachment anxiety, lower levels of self-compassion are likely to be found. In the study described in Chapter Four, only maternal rejection and self-compassion were mediated by attachment anxiety. In the study discussed in this chapter, using Gilbert et al.'s (2017) measure of self-compassion orientation, all the

perceived parenting styles were mediated by attachment anxiety. In the study in Chapter Four, maternal rejection accounted for 28% of the variance, and full mediation occurred. In the study described in this chapter, adult attachment and maternal rejection accounted for 20% of the variance in self-compassion and mediation was partial. Similar results were found for the relationship between paternal rejection and self-compassion when mediated by attachment anxiety; the model accounted for 20% of the variance in self-compassion, and the mediation was partial. Both had a significant indirect effect. This means that although attachment anxiety did mediate the relationship, parental rejection still had an effect on self-compassion, albeit it a smaller one. Both parental overprotection and paternal emotional warmth were fully mediated when attachment anxiety was included in each of the models, yet this mediation effect only explained 13% of the variance in self-compassion. Maternal emotional warmth and self-compassion were partially mediated by attachment anxiety and accounted for 18% of the variance.

The relationship between perceived parenting (rejection, overprotection and emotional warmth) and compassion towards others and from others was not mediated by adult attachment. This suggests that, in terms of giving and receiving compassion, parenting behaviour has far more influence on shaping an individual's future working models than their adult attachment style. Parental rejection and overprotection have a stronger negative impact, but parental emotional warmth has a more positive impact on giving compassion to others and receiving compassion than adult attachment. This suggests that childhood parenting experiences provide a starting point for how individuals approach other relationships, and thus provide a resource for life (Gilbert, 2010). Although perceptions of parenting experiences in childhood can change over time, they continue to exert a strong influence on an individual's working model.

5.10.5 Research Question Four: Is Social Connectedness Related to Perceived Paternal and Maternal Behaviour?

This research question aimed to determine whether there was a relationship between perceived parenting behaviours and social connectedness. The results showed that each parenting style significantly correlated with social connectedness. As previously suggested in Chapter Four, section 4.10.3, it could be the case that overprotection may be interpreted as caring, supportive, or too restrictive (Roo et al., 2021), resulting in a more complex relationship than was the case for emotional warmth and parental rejection. The significant associations between social connectedness and perceived parenting mean that it is a possible mediator of the relationship between perceived parenting and self-compassion.

5.10.6 Research Question Five: Does Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour, where there is an Association Between Compassion and Social Connectedness?

Not only has social connectedness not been studied as a mediator in the relationship between perceived parenting and self-compassion using a model, but neither have different orientations of giving compassion and receiving compassion. As reported earlier in this chapter, the relationships between parental overprotection and giving or receiving compassion were not mediated by social connectedness. Maternal overprotection had a significant indirect effect on self-compassion when mediated by social connectedness. The effect of maternal overprotection on social connectedness explained 23% of the variance in self-compassion, and the effect was indirect and medium in size ($ab=-.29$).

Social connectedness fully mediated the relationship between paternal emotional warmth and self-compassion and partially mediated the relationship between maternal emotional warmth

and self-compassion. The amount of variance in self-compassion explained by the model was 22% in the case of paternal emotional warmth and 25% in relation to maternal emotional warmth.

The relationships between paternal and maternal emotional warmth and compassion for others; and maternal emotional warmth and compassion from others, were fully mediated by social connectedness. Emotional warmth and social connectedness accounted for 13% (paternal) and 12% (maternal) of the variance in compassion from others. Maternal emotional warmth and social connectedness explained 46% of the variance in compassion for others. This could suggest that the early years are essential for creating a sense of belonging with a secure attachment base, and building on that in adulthood internalises a positive sense of self-worth. This self-worth allows a person to become more open to being compassionate towards others as they are less likely to believe there is any threat to their self-esteem because they have built and established trust (Bowlby, 1973), unlike those with a fragile sense of self who are more likely to distance themselves from others (Lee & Robbins, 1995).

The results regarding the relationship between parental rejection and self-compassion, when mediated by social connectedness, were also similar to the findings obtained using Neff's (2003b) self-compassion scale. The models used in Chapter Four showed that it accounted for 29% (paternal) and 31% (maternal) of the variance, respectively. The study described in this chapter, which used Gilbert et al.'s (2017) Self-Compassion Scale (compassion for self), found that it accounted for 29% (paternal) and 28% (maternal) of the variance. The models used in Chapter Four showed that social connectedness fully mediated the relationship between parental rejection and self-compassion, whereas social connectedness only partially mediated the relationship in the study discussed in this chapter. Only paternal rejection and compassion

for others were partially mediated by social connectedness, accounting for 19% of the variance in compassion for others. The results of this study show that social connectedness has a greater influence on self-compassion than it does on giving and receiving compassion. However, it is unknown whether this was caused by the differences in the self-compassion scales. Yet, the partial mediation effect reinforces the theory that early life experiences with caregivers strongly influence a person's internal working model (Bowlby, 1973), and therefore using social connectedness as a mediator did not nullify the significance of the relationship between parenting rejection and self-compassion.

5.10.7 Research Question Six: Does Adult Attachment and Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Adult Attachment and Social Connectedness?

There was serial mediation in the relationship between paternal and maternal rejection and emotional warmth and maternal overprotection when they were mediated via attachment anxiety and social connectedness. The relationship between paternal and maternal rejection and compassion for oneself was only partially mediated, and the model accounted for 31%-32% of the variance in self-compassion. The fact that the relationship was only partially mediated suggests that, although attachment anxiety and social connectedness played a mediating role, there was still a significant relationship between paternal and maternal rejection and compassion for self. Rohner et al. (2005) suggest that the current literature supports the idea that if an individual is rejected by a significant person in their life, it has a particularly powerful effect. This may go some way towards explaining the effect of the relationship between rejection and compassion for oneself. Even though attachment anxiety and social connectedness have an indirect mediatory effect, the direct effect of the relationship between rejection and compassion for self is stronger. Additionally, when attachment and social

connectedness mediate the relationship, there could be some competing factors between them, hence why the variance in compassion for self did not increase by much. This finding is discussed further in the Discussion chapter.

5.10.8 Summary

This chapter has broadened the understanding of how the relationship between perceived parenting behaviour and compassion can be viewed. Not all parenting behaviours have an association with compassion. From reviewing the limited research that has investigated the association between them, both positive and negative, it became clear that the variables compassion for others and compassion from others had not been previously studied with perceived parenting behaviour, and adult attachment. These findings therefore help to build on the knowledge acquired from the findings of previous studies by highlighting the significance of these relationships.

Only the relationship between maternal overprotection and self-compassion was fully mediated by social connectedness. The relationship between paternal and maternal rejection and compassion for self was partially mediated by social connectedness. The relationships between paternal rejection and maternal rejection and receiving compassion were not mediated by social connectedness, and neither was that between maternal rejection and giving compassion to others. However, the relationship between paternal rejection and giving compassion to others was partially mediated by social connectedness. The association between paternal emotional warmth and self-compassion was fully mediated by social connectedness, while that between maternal emotional warmth and self-compassion was partially mediated by social connectedness. The relationship between maternal emotional warmth and feeling compassion for others was fully mediated by social connectedness, whereas that between paternal

emotional warmth and feeling compassion for others was not significantly mediated by social connectedness. Finally, the relationships between paternal and maternal emotional warmth and receiving compassion from others were fully mediated by social connectedness. Social connectedness was shown to have a greater positive mediatory effect on perceived parenting and compassion than attachment anxiety (negative).

It appears that social connectedness played a more important mediatory role in the serial mediation model, but the variance was not much greater than that of the individual mediation models. It is unknown what influence attachment anxiety has on social connectedness, but there was found to be a negative correlation between them. This shows that the relationship between perceived parenting and the orientations of compassion is more complex, as adult attachment and social connectedness did not explain all of the variance in compassion.

5.10.9. Limitations, Strengths and Future Research

The findings of this chapter have extended the understanding of the relationship between perceived parenting behaviour and the orientations of compassion. Most studies in the literature reviewed in Chapter Two used the SCS (Neff, 2003a). However, in this chapter, compassion was explored from the perspective of different flows of compassion. Not only has this allowed another measure of self-compassion to be explored, but it has also provided an opportunity to investigate different aspects of compassion, such as giving compassion (compassion for others) and receiving compassion (compassion from others). However, it should be noted that the SCS and the CEAS are quite distinct measures and they examine compassion from very different perspectives, which limits the comparability between them.

Some of the subscales of the perceived parenting measure (s-EBMU; Arrindell et al., 2001) and aspects of compassion were found to be correlated. It may therefore be worthwhile to conduct research using the Fears of Compassion Scale (Gilbert et al., 2011), with similar flows of compassion (fears of compassion for self, for others and from others) and the same mediating factors (attachment anxiety and social connectedness) to gain further insights into the relationship between perceived parenting and compassion and the role played by adult attachment and social connectedness within this relationship.

CHAPTER SIX

Fears of Compassion

6.1 Introduction

The previous chapter explored the relationship between perceived parenting and the three orientations of compassion. In this chapter, the relationship between perceived parenting and fears of compassion is investigated. It explores the factors that may mediate the effect of the potential fears of compassion by examining fears of compassion in terms of 'flows'.

6.1.1 Chapter Overview

This chapter examines the relationship between retrospective perceptions of parenting received in childhood and fears of compassion using the Fear of Compassion Scale (FCS). The relationship between retrospective perceptions of parenting received in childhood and the three orientations of fears of compassion together with the mediatory effects of adult attachment (anxiety and avoidance) and social connectedness are examined. A cross-sectional research design is used to produce results for a community sample based on four psychometric questionnaires (s-EMBU; ECR-R; SCon; FCS) designed to address the aims of this study.

6.1.2 Previous Chapter

The results produced in the study described in Chapter Five showed a statistically significant correlation between parental emotional warmth (positive) and parental rejection and overprotection (negative) with all three orientations of compassion (for self, for others and from others). There was no significant association between perceived parenting and the three orientations of compassion when mediated by attachment avoidance. However, there was a significant association with attachment anxiety when it was used as a mediator in the

relationship between perceived parenting and self-compassion. Self-compassion was the only orientation found to be mediated by attachment anxiety, while the relationships between paternal rejection and compassion for others and from others; and maternal warmth and compassion for and from others, were mediated by social connectedness. Additionally, the relationships between emotional warmth and compassion from others; and between paternal and maternal rejection and compassion from others, were mediated by social connectedness. The only orientation of compassion to be mediated by attachment anxiety and social connectedness was self-compassion in relation to parental rejection, emotional warmth and maternal overprotection.

6.1.3 Fears of Compassion Scales

The Fears of Compassion Scales (FCS) are three scales developed by Gilbert et al. (2011) consisting of: fear of self-compassion; fear of compassion for others; and fear of compassion from others. The orientations or 'flows' of fears of compassion (for self, for others, from others) are the same as those for the Compassionate Engagement and Action Scales (CEAS) (Gilbert et al., 2017). However, the FCS scale focuses on resistance to engaging in compassionate experiences and behaviours. This resistance or fear of compassion may have effects on an individual's psychological well-being. It is anticipated that there is a relationship between perceived parenting in childhood and fear of compassion which is mediated by attachment anxiety and social connectedness. As was the case with self-compassion and the three orientations of compassion, it is likely that perceived parenting has a relationship with fears of compassion. Exploring this relationship may help to provide a greater understanding of the resistance to or fear of compassion.

6.1.4 Rationale for this study

The focus is to establish the relationship between perceived parenting in childhood and a fear of self-compassion, giving compassion and receiving compassion and if adult attachment (anxiety and avoidance) and social connectedness are possible underlying mechanism by which perceived parenting and fears of compassion are associated. Hence an individual's perceived parenting may predict adult attachment or social connectedness which in turn predicts an individual's block or resistance for self-compassion, giving compassion and receiving compassion. The overall aim of this study is to investigate individual differences in the fears of compassion.

The purpose of this study is to investigate whether fears of compassion, as measured on the Fears of Compassion Scales (fear of compassion for self, for others and from others), have a relationship with perceived parenting when mediated by either adult attachment (anxiety and avoidance) or social connectedness. Similarly to the Compassionate Engagement and Action Scales, the Fears of Compassion Scales measures the different orientations of fears of compassion (for self, for others and from others). It is anticipated that the type of parenting received in childhood (emotional warmth, rejection and overprotection) could have a relationship with all three orientations of fears of compassion. Not only that, but examining fears of compassion may provide further insights into the giving and receiving of compassion, resistance to compassion, and the influence that parenting behaviour, adult attachment, and social connectedness have on compassion. The purpose of this study was not only to explore this concept but also to consider other factors that may explain individual differences in compassion and resistance to it. It is likely that a factor such as social connectedness may be implicated in this process, as was the case with the three orientations of compassion. Therefore,

it is anticipated that including social connectedness along with adult attachment as a mediator, as was the case in the previous chapters, may further explain the variance between individuals in terms of compassion.

6.1.5 Research Aims, Objectives and Research Questions

This study investigates the relationship between perceived parenting received in childhood and fears of compassion, which are assessed using the Fears of Compassion Scales (Gilbert et al., 2011). It explores whether adult attachment (anxiety and avoidance) and social connectedness mediate this association. The following aims, objectives and research questions for the study conducted in this chapter are set out, as in the previous chapters, and related to the aims stated at the end of Chapter Two, and are specifically designed to examine fears of compassion.

6.1.5.1 Research Aims

Research Aims of this Study:

1. To explore the relationship between perceived parenting behaviour and fears of compassion when mediated with adult attachment.
2. To explore the relationship between perceived parenting behaviour and fears of compassion when mediated with social connectedness.
3. To explore the relationship between perceived parenting behaviour and fears of compassion when mediated with adult attachment and social connectedness.

6.1.5.2 Research Objectives

Research objectives of this research:

1. To determine whether there is a relationship between perceived parenting behaviour and the fears of compassion when mediated with adult attachment.

2. To determine whether there is a relationship between perceived parenting behaviour and the fears of compassion when mediated with social connectedness.
3. To determine whether there is a relationship between perceived parenting behaviour and the fears of compassion when mediated with adult attachment and social connectedness.

6.1.5.3 Research Questions

The study described in this chapter seeks to explore the research questions using the Fears of Compassion Scales as a measure of compassion. The following research questions reflect those in Chapter Three, and are addressed using the FCS to measure fears of compassion:

1. Is compassion related to perceived paternal and maternal behaviour?
2. Is adult attachment related to perceived paternal and maternal behaviour?
3. Does adult attachment mediate the relationship between fears of compassion and perceived parenting behaviour, where there is an association between fears of compassion and attachment?
4. Is social connectedness related to perceived paternal and maternal behaviour?
5. Does social connectedness mediate the relationship between fears of compassion and perceived parenting behaviour, where there is an association between fears of compassion and social connectedness?
6. Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour, where there is an association between fears of compassion and adult attachment and social connectedness?

6.2. Method

6.2.1 Study Design

The correlations between perceived parenting behaviours and the fears of compassion (fear of compassion for self, for others and from others) are tested. Where there is a statistically significant correlation, the mediatory effect of adult attachment is also tested. The relationship between perceived parenting and each of the fears of compassion mediated by social connectedness is then analysed. Finally, a serial mediation, which includes adult attachment and social connectedness, is conducted to determine what indirect effect they have on the relationship between perceived parenting and the three fears of compassion flows that correlate with perceived parenting behaviours.

6.2.2. Participants

Following the criteria for the previous studies, all the participants were over 18 years old with a good understanding of the English language. The aim was to recruit a minimum sample size of at least 115 participants. The questionnaires were completed via an online survey hosted by Qualtrics. To avoid repetition, please refer to the sections in Chapter Four on *Participant Eligibility (4.2.2.1)*, *Sample Size (4.2.2.2)*, and *Participant Recruitment (4.2.2.3)* for further details. This study used the same cohort of participants as in Chapter Four.

6.3. Measures

In this section, each measure is described in turn. All the measures included in the study were self-reported. The measures used in in this chapter are the s-EMBU, ECR-R, SCoN and FCS. To avoid repetition, those measures used in the previous chapter (Chapter Four: s-EMBU, ECR-R, SCoN) are only briefly described.

6.3.1 Demographic Information (Appendix D)

Demographic information was gathered by asking participants questions about their age, gender, marital status, education level, current employment and ethnicity. These demographic characteristics are commonly used in other surveys and help comparisons to be made with raw samples from other research studies. The information gathered can help to better understand and interpret the results and establish to whom the findings can be generalised.

6.3.2 Perceived parenting received in childhood: Short Form Egna-Minnen Beträffande Uppfostran - s-EMBU (Arrindall et al. 1999) (Appendix A)

As described in Chapter Three, the s-EMBU measures adults' perceptions of their parents and their upbringing. It contains 23 items consisting of three scales: Emotional Warmth (6 items), Rejection (7 items), and Protection (9 items). Question 9 was omitted from the subscale (Arrindell et al., 1999). In Pepping et al.'s study (2015), the s-EMBU demonstrated high internal consistency for emotional warmth (.94), rejection (.88) and overprotection (.87). Gilbert (2003) used the s-EMBU in a UK student population: the Cronbach alpha values were: emotional warmth (.80), rejection (.90) and overprotection (.78).

6.3.3 Attachment: Experiences in Close Relationships Scale (Revised)- ECR-R (Fraley et al., 2000) (Appendix E)

The ECR-R is a 36-item instrument for measuring adult attachment which is divided into two attachment subscales: Anxiety and Avoidance. Both subscales contain 18 items. Participants are asked about how they generally experience relationships. The items are rated on a 7-point Likert scale from 1-7. Low scores on both subscales indicate secure attachment. It has excellent reliability; a meta-analysis reported the α coefficients to be close to or above 0.90 (Ravitz et al., 2010) for both scales. It is widely used within the field of attachment research.

6.3.4 *Social Connectedness: The Social Connectedness Scale (Revised) (Lee, Draper & Lee, 2001) (Appendix F)*

The Revised Social Connectedness Scale measures the degree to which individuals perceive their connection to themselves and those around them. The revised version of the ECR contains 20 items (Lee et al, 2001). The items are rated on a 5-point Likert scale from 1 - 5. Higher scores indicate a stronger sense of connectedness. The internal reliability of this scale in a student population was found to be: $\alpha = .92$ (Lee et al.,2001). The authors consider that a mean score of 3.5 or greater ('slightly agree' to 'strongly agree') indicates a tendency to feel more socially connected.

6.3.5 *Fears of Compassion: Fears of Compassion Scales – FCS (Gilbert et al., 2011) (Appendix O)*

The FCS uses three scales to measure fears of compassion: fear of compassion for self (fear of self-compassion); fear of compassion from others (fear of receiving compassion from others); and fear of compassion for others (fear of giving compassion to others). The items are rated on a 5-point Likert scale, ranging from 0 (Don't agree at all) to 4 (Completely agree). Scale 1 is comprised of 10 questions on the *expression of compassion for others*; scale 2 consists of 13 questions on *responding to the expression of compassion from others*; and scale 3 consists of 15 questions on *expressing kindness and compassion towards yourself*. The overall score is calculated by summing the items for each of the scales. There are 38 questions in total. The Cronbach's alpha values for the students in Gilbert et al.'s (2011) study were 0.92 fear of compassion for self, 0.85 fear of compassion from others and 0.84 fear of compassion for others.

6.4 Ethical Considerations

The ethical considerations for this study are the same as those described in the previous chapter, as the same data are used and, therefore, to avoid repetition, please refer to the following sections in Chapter Four for more information: Consent (4.4.1), Confidentiality (4.4.2), Data Access, Storage and Security (4.4.3), Risk Management (4.4.) Informed consent was obtained from each of the participants at the beginning of the survey (see Appendix I, Participant Information Sheet (see Appendix H) and Debrief Sheets (see Appendix J).

6.5 Procedure

6.5.1 Participants

The procedure for completing the questionnaire was the same as described in the previous chapters. Participants were required to provide their consent electronically. They were advised that they could withdraw from the study at any time or leave questions unanswered without giving any reasons for doing so. Participants were also advised that once their responses were submitted, it would not be possible to remove their data due to the data being anonymous. This information was stated on the Participation Information Sheet at the beginning of the questionnaire (Appendix H). Participants were asked to confirm their eligibility and consent to participate (Appendix I). Once they had completed the questions, the final page contained a list of organisations where participants could get further support and advice if participating in the survey caused them any discomfort (Appendix J).

6.5.2 Data Collection

The data were collected between June 2016 and February 2017 via an online survey. After a participant had submitted their responses to the questionnaire, the data was downloaded into

an SPSS program (SPSS for Windows, version 29.0) directly from Qualtrics in order to minimise the potential for error during manual input.

6.6 Data Analysis

Models 4 and 6 are used for the mediation analysis. For the study in this chapter, the outcome variable is the fears of compassion (for self, for others, from others). Model 6 is a mediation model that allows up to 4 mediators to be used in a serial operation. Mediator analysis is carried out to explain the relationship between the predictor variable (parenting received in childhood) and the outcome variable (fears of compassion) with the addition of the mediators(s) (adult attachment and social connectedness). As well as showing the direct effect of parenting on fears of compassion (for self, for others, from others), it can also show the indirect effect of parenting and self-compassion when mediated through adult attachment only, and the indirect effect of parenting on fears of compassion when mediated through adult attachment and social connectedness in a serial mediation model.

6.6.1 Research Question One: Are Fears of Compassion Related to Perceived Maternal and Paternal Behaviour?

To address this research question, the correlations between each perceived parenting style and three flows of fears of compassion are first analysed. Three styles of perceived parenting behaviour are explored: rejection, overprotection and emotional warmth; and fathers and mothers are analysed separately.

6.6.2 Research Question Two: Is Adult Attachment Related to Perceived Paternal and Maternal Behaviour?

Correlational analysis is used to answer this question by examining whether there are associations between adult attachment and perceived parental behaviour. For these analyses, the scores for the sub-scales of adult attachment (attachment anxiety and attachment avoidance) are explored together with the perceived parenting styles of rejection, overprotection and emotional warmth, from fathers and mothers. Because fears of compassion were also analysed in the first survey, these results will be the same as those described in Chapter Four.

6.6.3 Research Question Three: Does Attachment Mediate the Relationship Between the Fears of Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Attachment?

Each of the flows of fears of compassion is run separately using the mediation model. As mentioned in the previous two chapters, Baron and Kenny's (1986) three steps of regression method is used. In step 1, perceived parenting behaviour must predict each of the fears of compassion. Step 2 requires perceived parenting behaviour to predict adult attachment (attachment anxiety and avoidance). In step 3, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and adult attachment (attachment anxiety and avoidance) must predict each of the fears of compassion.

6.6.4 Research Question Four: Is Social Connectedness Related to Perceived Paternal and Maternal Behaviour?

Correlational analysis is used to examine whether there were associations between social connectedness and perceived parental behaviour. For these analyses, social connectedness is

represented as a single score and explored with rejection, overprotection and emotional warmth from fathers and mothers, which are analysed separately.

6.6.5 Research Question Five: Does Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour, where there is an Association Between Compassion and Social Connectedness?

The flows of fears of compassion are analysed separately. The investigations are carried out using correlation analyses, followed by a mediation analysis using Model 4 to determine whether social connectedness is the potential mediator. Again, Baron and Kenny's (1986) three steps of regressions method is used. As described in section 6.6.3. In step 1, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) must predict each of the flows of fears of compassion. In step 2, perceived parenting behaviour must predict social connectedness. For step 3 to be fulfilled, perceived parenting behaviour (paternal and maternal rejection, overprotection and emotional warmth) and social connectedness must predict each of the flows of fears of compassion.

6.6.6 Research Question Six: Does adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour where there is an association between compassion and adult attachment and social connectedness?

Assuming that the requirements of the three steps of regressions have been met in the previous questions (5 & 6), a serial mediation analysis using Model 6 is then conducted to determine whether adult attachment and social connectedness are potential mediators in the relationship between perceived parenting behaviour and compassion. Those mediation models that showed evidence of an indirect effect, regardless of whether it was fully or partially mediated, are analysed.

6.7 Results

6.7.1 New Variables, Data Screening and Missing Variables.

The results obtained for this study were subject to the same process regarding data screening and missing variables as those described in Chapter Four (see sections 4.7.1 & 4.7.2). An analysis of missing values (listwise) for the Fear of Compassion Scale (FCS), the Experience of Close Relationships–Revised (ECR-R), and the Social Connectedness Scale (SCoN), indicated that no scale was missing (listwise) more than 2.3% of its data. This was slightly higher than for the SCS, ECR-R and SCoN combination in which no more than 1.5% of the data was missing for any item. At the end of this process, a total of 131 participants remained in the study.

6.7.2 Overview of Demographic Information

The mean age of the participants was 35.95 years (age range between 18 and 73 years). With regard to ethnicity, 67.2% of the participants were white British (n=88) and 72.5% lived in the United Kingdom (n=95). In relation to education, the highest percentage of participants had a degree or higher degree (47.3%; n=62) and, in terms of occupation, the highest percentage were students (36.6%; n=48), followed by professional workers (32.1%; n=42). 53 out of the 131 participants were married, representing 40.3% of the sample. The majority of the participants were female (n=85; 64.9% female), while 20.6% were males (n=27), and 19 participants (14.5%) had missing data due to a survey design error at the beginning of the survey. Full details of the demographic information can be found in Chapter Four (see Table 4.1).

6.7.3 Outliers and Assumption of Normality

For a summary of the data from Chapter Four, see Table 6.1, below. There was evidence to show that the following variables did not have a normal distribution: parental rejection (s-

EMBU), paternal overprotection (s-EMBU), attachment avoidance (ECR-R), and social connectedness (SCon). For more detailed information, please see Chapter Four, sections 4.7.6 through to 4.7.9.

Table 6.1: Results of Variables for Normal Distribution

	Mean (Std.E)	Standard Deviation	Skewness (z value)	Kurtosis (z value)	Shapiro- Wilks Sig.
Father Rejection	1.74	.759	1.202 (5.64)	.921 (2.18)	.000
Mother Rejection	1.79	.713	1.111 (5.24)	.796 (1.89)	.000
Father Emotional Warmth	2.54	.851	-.190 (-.89)	-1.058 (-2.50)	.000
Mother Emotional Warmth	2.73	.831	-.251 (-1.18)	-.982 (-2.33)	.000
Father Overprotection	2.03	.709	.673 (3.16)	-.142 (-.36)	.000
Mother Overprotection	2.34	.703	.163 (.77)	-.927 (-2.20)	.003
Attachment Anxiety	3.02	1.20	.068 (.32)	-1.156 (-2.75)	.000
Attachment Avoidance	3.41	1.07	.033 (.16)	-1.061 (-2.53)	.004
Social Connectedness	3.82	1.00	-.559 (-2.64)	.241 (.66)	.003

6.7.3.1 Fear of Compassion (FCS) assumption of normality of data

In the case of the fear of compassion scale, all the orientations were skewed. Only the fear of compassion ‘from others’ had z-values for skewness that fell within the normal range of +/- 1.96. All three orientations of the fear of compassion scales were within the range for kurtosis. However, the orientations of compassion for others and fear of compassion for self had more extreme skewness scores, and both were positively skewed. This demonstrates that neither orientations had a normal distribution (see Table 6.2).

The tests for normality contradicted each other in that the Kolmogorov-Smirnov (K-S) test calculated that all three FCS scales were normally distributed (FCS for others, z -value=.200; FCS from others, z -value=.200; FCS for self, z -value=.023) but the Shapiro-Wilks test showed that all three had significantly non-normal distributions (FCS for others, z -value=.022; FCS from others, z -value=.018; FCS for self, z -value= \leq .001).

Table 6.2: Results of the three flows of Fear of Compassion for Normal Distribution

	Mean (Std.E)	Standard Deviation	Skewness (<i>z value</i>)	Kurtosis (<i>z value</i>)	Kolmogorov- Smirnov sig.	Shapiro- Wilks Sig.
FCS (for self)	2.37	.983	.619 (2.92)	-.310 (-0.74)	.023	.000
FCS (for others)	2.85	.882	.095 (4.48)	-.674 (-1.60)	.200*	.022
FCS (from others)	2.50	.854	.373 (1.76)	-.220 (-.052)	.200*	.018

A visual examination of the histograms for the three flows of FCS revealed that the bell curve for compassion for others was symmetrical and that of compassion from others was slightly positively skewed. In the case of compassion for self, the bell curves were skewed to the left, at the bottom end of the scales. All three had a heavy-tailed distribution to the left, especially compassion from others and compassion for self.

The Q-Q plots for both FCS for others and FCS from others were on or very close to the line. However, the dots sagged away from the line at both ends of the scale but predominantly at the higher end of the scoring. Regarding FCS for self, the histogram showed that the data was distinctly positively skewed, and the Q-Q plot suggests that this is because there is a more predominant drift away from the line. Sagging occurred at the higher end of the scale, but at the lower end of the scale the drift away from the line is more prominent, which is supported by the histogram.

6.7.4 Transformation of the data

As explained in the previous chapter, the skewed data were transformed using an appropriate method of transformation that represented the shape of the skew, as recommended by Pallant (2013). Although the data statistically improved, the transformed data still looked as skewed as the raw data. Therefore, it was decided that the data should remain untransformed for the study.

6.8 Descriptive data of Scales

6.8.1 Central Tendency

Table 6.3, below, shows the descriptive data for each of the scales and subscales. Fear of compassion (from others, for others and for self) is the dependent variable; perceived parenting behaviour (parental emotional warmth, rejection, overprotection) is the independent variable; and adult attachment (avoidance and anxiety) and social connectedness are the potential mediators. Due to the non-normal distribution of the data, the central tendency was computed and summarised to report the median and range/IQR. Most of the medians were relatively central within the range for the scale, except those for paternal and maternal rejection, which were closer to the lower end of the scale range.

6.8.2 Internal Consistency

The internal consistency (Cronbach alpha) determines the reliability of the measure and was calculated for each of the scales within this study (see Table 6.3). The coefficients of all the variables were above .81. This means that all the variables had a very good level of reliability (Field, 2018).

Table 6.3. Descriptive data for the scales and subscales

Variables	N	Mean	Median	IQR	Scale Range	SD	Alpha
FCS For Self	131	2.37	2.27	(1.60 – 3.00)	0-4	.983	.95
FCS For Others	131	2.85	2.90	(2.30 – 3.40)	0-4	.882	.90
FCS From others	131	2.50	2.46	(1.85 – 3.08)	0-4	.854	.91
Father's Rejection	129	1.74	1.43	(1.14 – 2.29)	1-4	.759	.89
Father's Emotional Warmth	129	2.54	2.67	(1.38 – 3.17)	1-4	.852	.89
Father's Overprotection	129	2.00	2.00	(1.41 – 2.44)	1-4	.695	.81
Mother's Rejection	130	1.79	1.57	(1.16 - 2.29)	1-4	.713	.85
Mother's Emotional Warmth	130	2.73	2.83	(2.00 – 3.33)	1-4	.831	.89
Mother's Overprotection	130	2.34	2.28	(1.67 – 2.81)	1-4	.703	.82
Anxious Attachment	131	3.02	3.17	(1.89 – 3.86)	1-6	1.20	.94
Avoidant Attachment	131	3.41	3.56	(2.39 – 4.22)	1-6	0.96	.94
Social Connectedness (Total)	131	3.82	3.95	(3.40 – 4.60)	1-6	1.00	.94

6.9 Research Questions

6.9.1 Research Question One: Are Fears of Compassion Related to Perceived Paternal and Maternal Behaviour?

The first aim relates to the association between perceived parental behaviour in childhood and fears of compassion. Paternal and maternal behaviour were investigated separately, and the findings for the population who took part in this study are presented in Table 6.3. Due to the non-normal distribution of the three orientations, a Spearman's (*rho*) correlation test was conducted. It was likely that the results for the three orientations of fears of compassion would be similar to those for the three orientations of compassion. The results regarding the correlations between fears of compassion and adult attachment are shown in Table 6.4., below. A high score for parental rejection and overprotection is likely to have a positive correlation with fears of compassion and parental emotional warmth.

In the case of the fear of compassion for self orientation, both paternal and maternal emotional warmth were negatively correlated, and both were statistically significant. This shows that there is a relationship between emotional warmth from either parent and a fear of compassion for self. However, if a person experiences parental emotional warmth, their fear of compassion for self will be lower. Parental rejection and parental overprotection were positively correlated in relation to both the mother and father, but only paternal overprotection was non-significantly correlated. Therefore, this shows that if a person perceives that they experienced parental rejection and overprotection from their mother, they are likely to have a fear of compassion towards themselves.

Regarding the orientation of fear of compassion for others, both paternal and maternal emotional warmth were negatively correlated, but neither was statistically significant. However, paternal and maternal rejection and overprotection were positively and significantly correlated. This indicates that parental rejection and parental overprotection in childhood is associated with a fear of expressing compassion to others.

Finally, the orientation of fear of compassion from others was again negatively correlated with parental emotional warmth and with parental rejection, but positively correlated with parental overprotection. However, only the correlation with paternal overprotection was not statistically significant. Therefore, if a person perceives their parenting as emotionally warm, they are less likely to have a fear of receiving compassion from others. However, if a person feels they were rejected by their parents in childhood, this is associated with a fear of receiving compassion from others.

Table 6.4 Correlations Between Perceived Parenting and Fears of Compassion.

	<i>FCC</i>	<i>FCS</i>	<i>FCS</i>
	<i>For Self</i>	<i>For Others</i>	<i>From Others</i>
<i>s-EMBU Paternal Emotional Warmth</i>	-.187*	-.138	-.270**
<i>s-EMBU Maternal Emotional Warmth</i>	-.224*	-.077	-.309**
<i>s-EMBU Paternal Rejection</i>	.350**	.435**	.419**
<i>s-EMBU Maternal Rejection</i>	.388**	.293**	.466**
<i>s-EMBU Paternal Overprotection</i>	.124	.319**	.118
<i>s-EMBU Maternal Overprotection</i>	.251**	.293**	.259**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

6.9.2 Research Question Two: Is adult attachment related to perceived paternal and maternal behaviour?

The results for the correlations between parenting behaviours and adult attachment are shown in Table 6.5., below, and are the same as those in Chapter Four, Table 4.4. The two-dimensional attachment measure shows a significant correlation between paternal rejection, maternal rejection and paternal emotional warmth with attachment anxiety. Maternal rejection was the only parenting behaviour that had a statistically significant relationship with attachment avoidance. The results show that the perceived parenting behaviour of rejection, in the case of both parents, is related to attachment anxiety, while maternal rejection is the only parenting behaviour related to attachment avoidance.

Table 6.5: Correlations Between Perceived Parenting and Adult Attachment

	<i>Anxiety</i>	<i>Avoidance</i>
<i>s-EMBU Paternal Rejection</i>	.146	.131
<i>s-EMBU Maternal Rejection</i>	.301**	.246**
<i>s-EMBU Paternal Emotional Warmth</i>	-.241**	-.151
<i>s-EMBU Maternal Emotional Warmth</i>	-.150	-.125
<i>s-EMBU Paternal Overprotection</i>	-.002	.018
<i>s-EMBU Maternal Overprotection</i>	.116	-.005

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

6.9.3. Research Question Three: Does Adult Attachment Mediate the Relationship Between Compassion and Perceived Parenting Behaviour, where there is an Association Between Compassion and Adult Attachment?

Consistent with the approach taken in the previous two chapters, those parenting styles that correlated with the FCS subscales were analysed (see Table 6.4.) to find out whether attachment anxiety and avoidance had a mediatory effect. The results are discussed in the following sections in relation to the presence of mediation and the percentage of variance for each of the FCS subscales.

6.9.3.1. Does Adult Attachment Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion for Self?

There was no statistically significant bivariate association between parental overprotection and FCS for self when the relationship was mediated by attachment anxiety and avoidance, so no analysis was run. Regarding maternal rejection and its association with FCS for self, partial mediation was found for both attachment anxiety and avoidance. This means that attachment anxiety and avoidance do not entirely account for the association between maternal rejection and fear of compassion for self but they go some way towards explaining the variance.

Figure 6.1 shows that the direct effect of maternal rejection on fear of compassion for self reduced by a small amount but remained statistically significant when mediated by attachment anxiety ($b=.40$, $SE = .11$, $p=>.001$). The effect was significant and indirect ($ab=.12$, BCa CI [.025, .240]). When the effect of maternal rejection on fear of compassion for self was mediated by attachment anxiety, the variance was 28% ($R^2 = .28$).

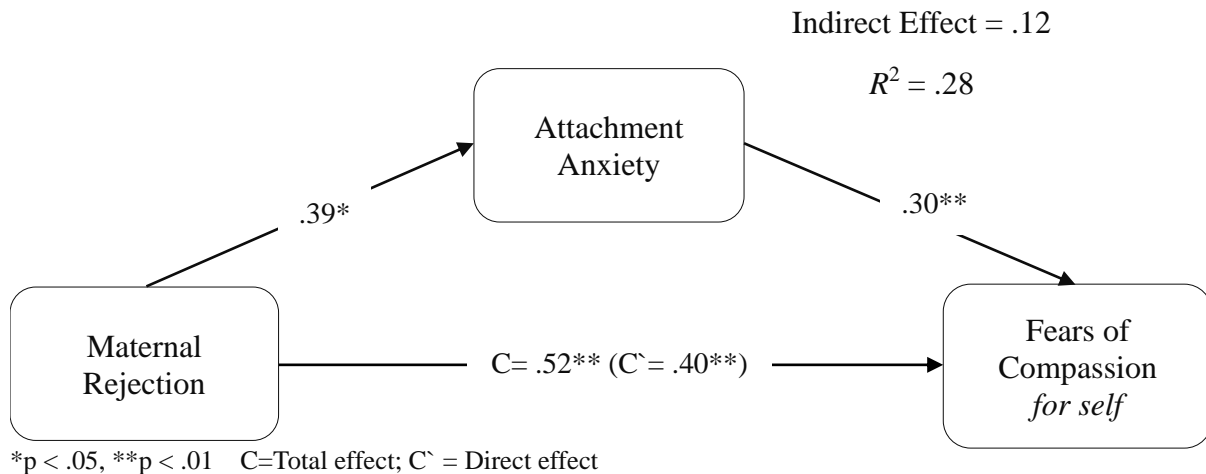
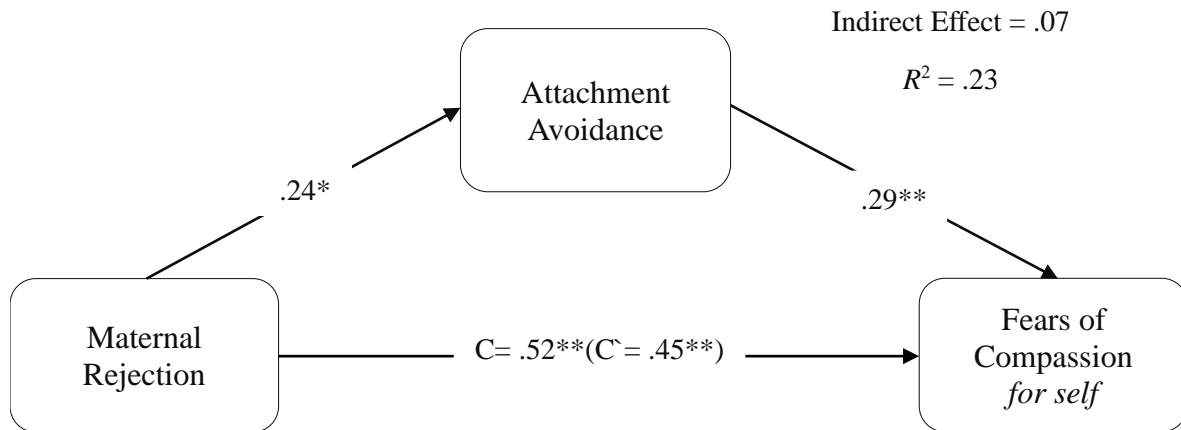


Figure 6.1. Maternal Rejection predicts fears of compassion (for self) when partially mediated by Attachment Anxiety.

Figure 6.2 shows that the strength of the direct effect of maternal rejection on fear of compassion for self does diminish, but the total effect remains statistically significant when mediated by attachment avoidance ($b=.45$, $SE = .07$, $p > .001$). The mediation was partial and the effect was small, significant and indirect ($ab=.068$, $BCa\ CI [.004, .169]$). When the relationship between maternal rejection and FCS for self was mediated by attachment avoidance, the variance was 23% ($R^2 = .23$). Therefore, when maternal rejection is high, it has a positive relationship with attachment anxiety, which indicates that attachment anxiety will also be higher and, in turn, associated with a higher fear of compassion for self. This shows that there is a relationship between maternal rejection and attachment anxiety and avoidance, which is associated with a fear of compassion for self. However, the association between maternal rejection and fear of compassion for self is still significant.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.2. Maternal Rejection predicts fears of compassion (for self) when mediated by Attachment Avoidance.

No association was found between a father's emotional warmth and fear of compassion for self when the relationship was mediated by attachment avoidance, but full mediation occurred with attachment anxiety (Figure 6.3). When attachment anxiety was included in the model, the total effect of emotional warmth and FCS for self was statistically significant [$b = -.23$, $SE = .101$, $p = .025$], but the direct effect became non-significant [$b = -.11$, $SE = .095$, $p = .246$], which is indicative of full mediation. The effect size was small to medium and accounted for 21% ($R^2 = .21$) of the variance in FCS for self. Therefore, when paternal emotional warmth is high, it has a negative relationship with attachment anxiety, which indicates that levels of attachment anxiety would be lower, and, in turn, would be associated with a lower fear of compassion for self. There was no effect on the relationship between maternal emotional warmth and FCS for self when mediated by attachment anxiety or attachment avoidance. However, this was not true in the case of paternal emotional warmth.

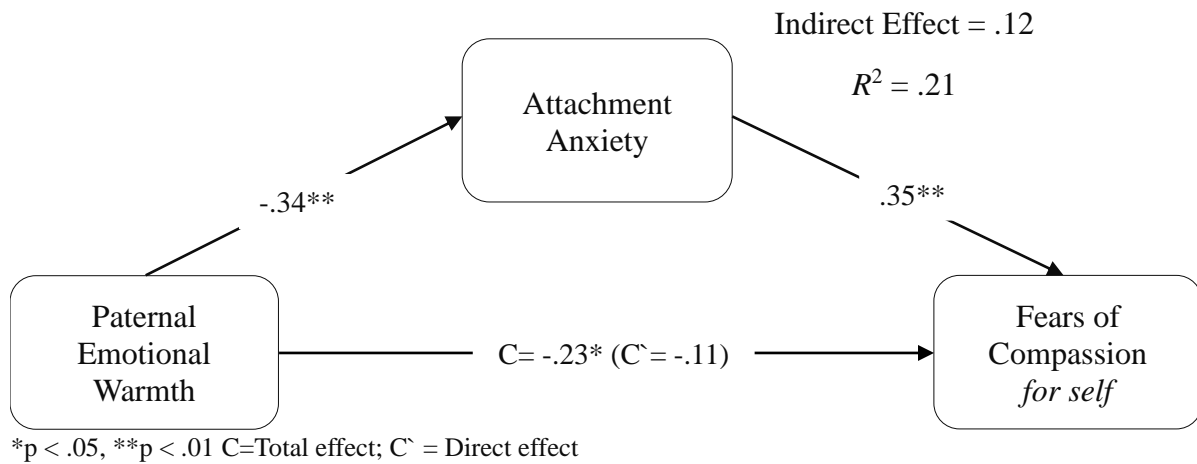


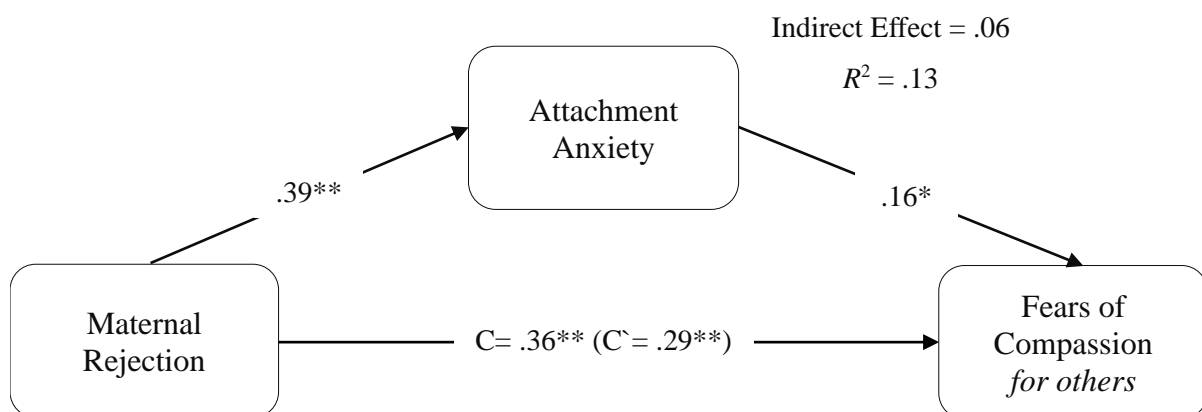
Figure 6.3. Paternal Emotional Warmth predicts Fear of Compassion (for self) when mediated by Attachment Anxiety.

The analysis was only run for those parenting styles shown in Table 6.4 that had a correlation with fears of compassion to establish whether adult attachment anxiety and avoidance had a mediatory effect. In order to discover whether there was a significant indirect effect on each model, the b -value represents the regression coefficient. The 95% Confidence Interval (CI) for the indirect effect is a BCa bootstrapped CI based on 5,000 samples, which was used to calculate the variance in the relationship between fears of compassion and perceived parenting in childhood when mediated by adult attachment. If the CI range does not include zero, then this indicates that there is mediation between the variables. Although the effect size can be reported in various ways, for these results, the R^2 value is used to measure the proportion of the variance that can be explained by the indirect effect. Although the variance is shared by the predictor and the mediator, it cannot be attributed to either of these individually.

6.9.3.2. Does Adult Attachment Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion for Others?

When the mediating effect of anxiety and avoidance on parental emotional warmth and overprotection and fear of compassion for others was assessed, the results showed that the mediation was non- statistically significant. When the relationship between paternal and maternal rejection and fears of compassion for others was mediated by attachment avoidance, the effect was also non- statistically significant.

Partial mediation was found to have occurred when the association between perceived parenting in childhood and FCS for others, and between maternal rejection and FCS for others was mediated by attachment anxiety (Figure 6.4.), but no significant mediation took place in the case of paternal rejection. The indirect coefficient of maternal rejection on FCS for others mediated through attachment anxiety was significant ($ab=.061$, BCa CI [.005, .159]). The effect size was small and accounted for 13% ($R^2 = .13$) of the variance in FCS for others. Therefore, higher maternal rejection was partly associated with higher attachment anxiety, resulting in a greater fear of compassion for others. However, the direct effect on the relationship between maternal rejection and FCS for others was still greater.



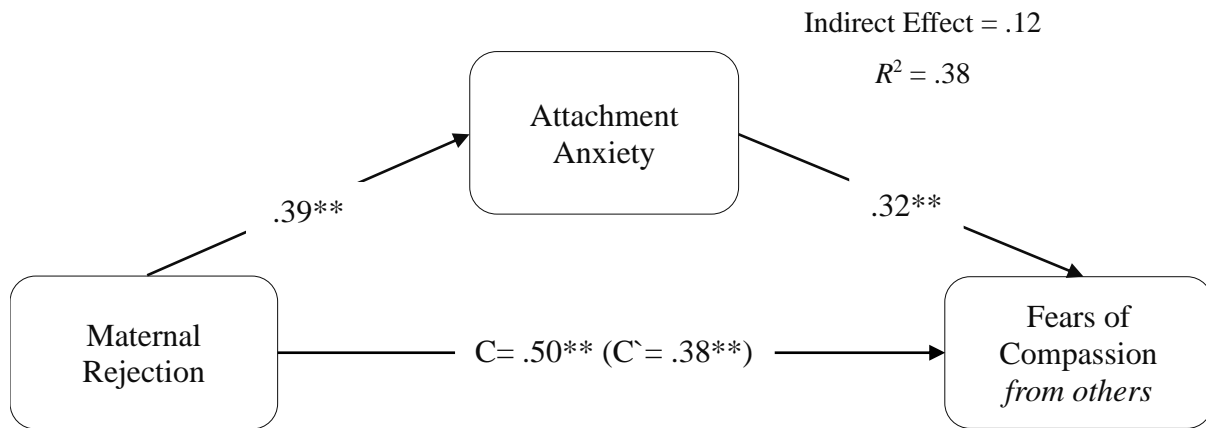
* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.4. Maternal Rejection Predicts Fears of Compassion (for others) when mediated by Attachment Anxiety.

6.9.3.3. Does Adult Attachment Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion from Others?

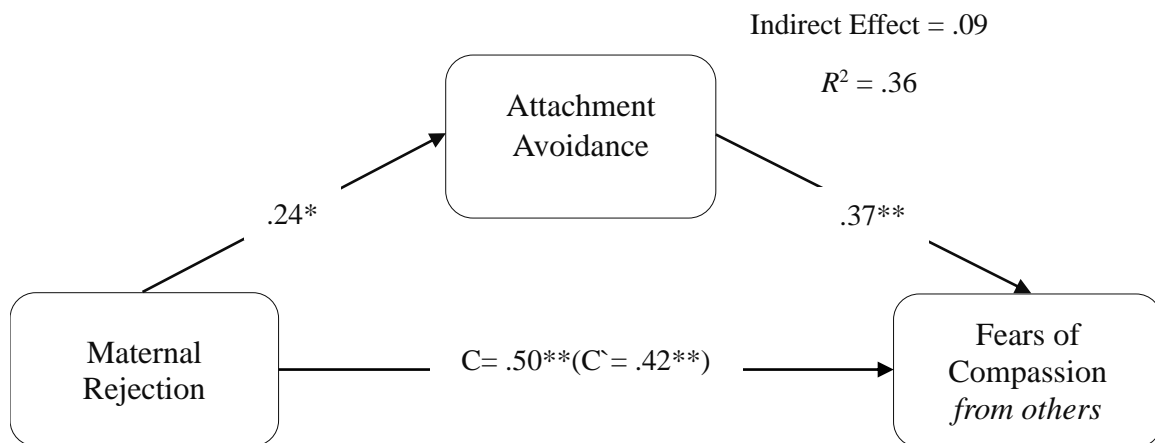
As was the case with the previous results, the relationship between parental overprotection and attachment anxiety and avoidance was not mediated by attachment anxiety and avoidance. The relationship between paternal rejection and FCS from others was also not significantly mediated by attachment anxiety or avoidance. The associations between maternal rejection and FCS from others were found to be partially mediated by both attachment anxiety and avoidance.

In the case of both attachment anxiety and avoidance, when the mediator was introduced into the model, the total effects on both models (Figure 6.5 & 6.6) were statistically significant [$rho = -.50$, $p > .001$]. However, the association was reduced but remained statistically significant. The indirect coefficient of maternal rejection on FCS from others mediated through attachment anxiety was significant ($ab = .12$, BCa CI [0.23, 2.53]). With regard to attachment anxiety, there was a small effect size that accounted for 38% ($R^2 = .38$) of the variance in FCS from others. This means that when maternal rejection is high, attachment anxiety is high, and therefore, FCS from others is also high. The indirect coefficient of maternal rejection on FCS from others mediated through attachment avoidance was significant ($ab = -.088$, BCa CI [-.007, .188]). With regard to attachment avoidance, there was a small effect size that accounted for 36% ($R^2 = .36$) of the variance in FCS from others. As was the case with attachment anxiety, when maternal rejection is high, attachment avoidance is high, and consequently, FCS from others is also high. However, both attachment anxiety and avoidance had a partially mediating effect, but the direct effect on maternal rejection and FCS from others was stronger.



* $p < .05$, ** $p < .01$ C = Total effect; C' = Direct effect

Figure 6.5. Maternal Rejection predicts Fears of Compassion (from others) when mediated by Attachment Anxiety.

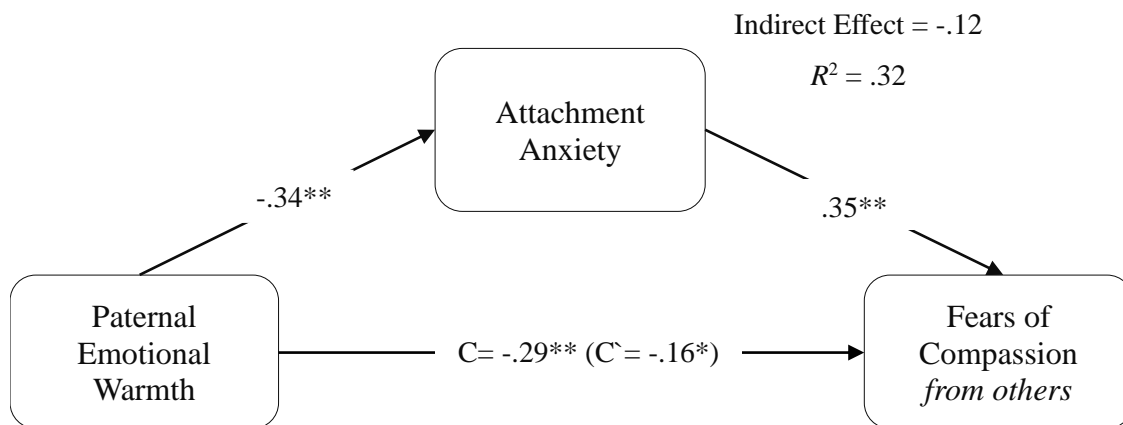


* $p < .05$, ** $p < .01$ C = Total effect; C' = Direct effect

Figure 6.6. Maternal Rejection predicts Fears of Compassion (from others) when mediated by Attachment Avoidance.

Only paternal emotional warmth and attachment anxiety were partially mediated by attachment anxiety (Figure 6.7). Their total effect was statistically significant [$\rho = -.29$, $p = .001$], but although the strength of the association was reduced [$\rho = -.16$, $p = .032$], the direct effect remained significant. Again, this indicated partial mediation, meaning that part of the influence of paternal emotional warmth on FCS from others goes through the mediator of attachment

anxiety. This means that attachment anxiety does not entirely account for the association between paternal emotional warmth and FCS from others. The results for the indirect coefficient of paternal emotional warmth on FCS from others mediated through attachment anxiety were significant, ($ab=.12$, BCa CI [-.23, -.030]). The effect size was once again small, and attachment anxiety accounted for 31% ($R^2 = .36$) of the variance in FCS from others.



* $p < .05$, ** $p < .01$ C = Total effect; C' = Direct effect

Figure 6.7. Paternal Emotional Warmth predicts Fears of Compassion (*from others*) when mediated by Attachment Anxiety.

Table 6.6 below, shows the results of the mediation analyses where adult attachment was the mediator.

Table 6.6 Results for the Mediation Analyses of Retrospective Parenting and Fears of Compassion *for self, for others, and from self* via Adult Attachment.

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients			Indirect Effect					
			Effect of IV on M (a)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	95% CI [Lower;Upper]	R ²	Findings	
Paternal Warmth →	Anxiety →	Fears of Compassion (Self)	-.34**	.35**	-.23*	-.11	-.12	.05	[-.22, -.03]	.21	significant, full mediation
Maternal Rejection →	Anxiety →	Fears of Compassion (Self)	.39**	.30**	.52**	.41**	.12	.06	[.02, .24]	.28	significant, partial mediation
Maternal Rejection →	Avoidance →	Fears of Compassion (Self)	.24**	.29**	.52**	.45**	.07	.04	[.00, .17]	.23	significant, partial mediation
Maternal Rejection →	Anxiety →	Fears of Compassion (for others)	.39**	.16*	.36**	.29**	.06	.04	[.01, .16]	.13	significant, partial mediation
Maternal Rejection →	Avoidance →	Fears of Compassion (for others)	.24	.08	.36	.34	.02	.03	[-.02, .08]	.09	non-significant mediation
Paternal Warmth →	Anxiety →	Fears of Compassion (from others)	-.34**	.35**	-.29**	-.17*	-.12	.05	[-.22, -.03]	.32	significant, partial mediation
Maternal Rejection →	Anxiety →	Fears of Compassion (from others)	.39**	.32**	.50**	.38**	.12	.06	[.03, .25]	.38	significant, partial mediation
Maternal Rejection →	Avoidance →	Fears of Compassion (from others)	.24*	.37**	.50**	.42**	.09	.05	[.01, .19]	.36	significant, partial mediation

p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Anxiety = Adult Attachment Anxiety; Avoidance = Adult Attachment Avoidance, SE = Standard Error, CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M = Mediator = Adult Attachment; DV = Dependent Variable (Compassion)

6.9.4. Research Question Four: Is Social Connectedness Related to Perceived Paternal and Maternal Behaviour?

The fourth research question aimed to analyse whether there is a relationship between parenting received in childhood and fears of compassion when mediated by social connectedness. These variables are based on theoretical assumptions from the literature, because they have not been previously tested. Therefore, it is important to determine whether social connectedness mediates the relationship between parenting received in childhood and the three orientations of fears of compassion. The correlations were consistent with those between perceived parenting behaviours and social connectedness shown in Table 4.5 in Chapter Four, and the same dataset was used to conduct both analyses. Table 6.7, below, shows the correlations between perceived parenting and social connectedness.

Table 6.7: Correlations between Perceived Parenting and Social Connectedness

	<i>Social Connectedness</i>
<i>s-EMBU Paternal Rejection</i>	-.356**
<i>s-EMBU Maternal Rejection</i>	-.372**
<i>s-EMBU Paternal Emotional Warmth</i>	.294**
<i>s-EMBU Maternal Emotional Warmth</i>	.322**
<i>s-EMBU Paternal Overprotection</i>	-.026
<i>s-EMBU Maternal Overprotection</i>	-.206*

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

6.9.5 Research Question Five: Does Social Connectedness Mediate the Relationship Between Fears of Compassion and Perceived Parenting Behaviour, where there is an association between Fears of Compassion and Social Connectedness?

Using the same criteria for running the analysis, only statistically significant associations between perceived parenting and the fears of compassion were tested to determine whether social connectedness had a mediatory effect. The results are discussed below.

6.9.5.1 Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion for Self?

There was no statistically significant association between parental overprotection and FCS for self when the relationship was mediated with social connectedness. However, an association was found between parental rejection and FCS for self when mediated with social connectedness. In the case of paternal rejection, the mediation effect was a full one (Figure 6.8), while the effect on maternal rejection involved partial mediation (Figure 6.9). The associations between both paternal and maternal emotional warmth and FCS for self were fully mediated by social connectedness.

With regard to the relationship between paternal rejection and FCS for self, with social connectedness as the mediator, the total effect of paternal rejection was significant ($b = -.38$, $SE = .11$, $p > .001$), but when it was mediated by social connectedness, the direct effect became non-significant ($b = .16$, $SE = .09$, $p = .07$). Full mediation occurred with this model. The effect of paternal rejection on FCS for self, mediated through social connectedness, was indirect and significant ($b = .22$, 95% BCa CI [.067, .406]). It was a medium sized effect, and approximately 46% ($R^2 = .46$) of the variance in fear of compassion for self was accounted for by the predictors.

This indicated that if paternal rejection is high, then this has a negative effect on social connectedness, which, in turn, predicts a higher FCS for self.

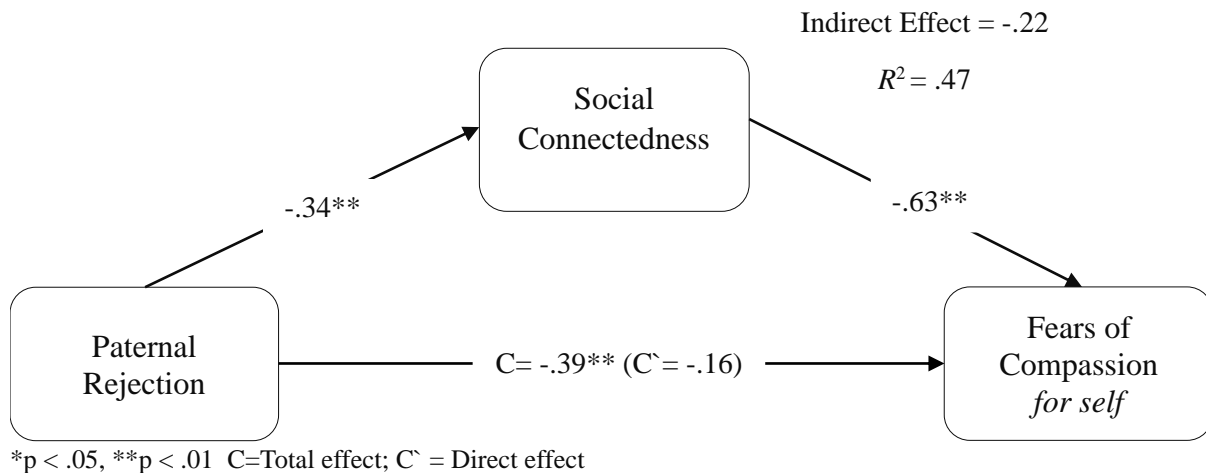
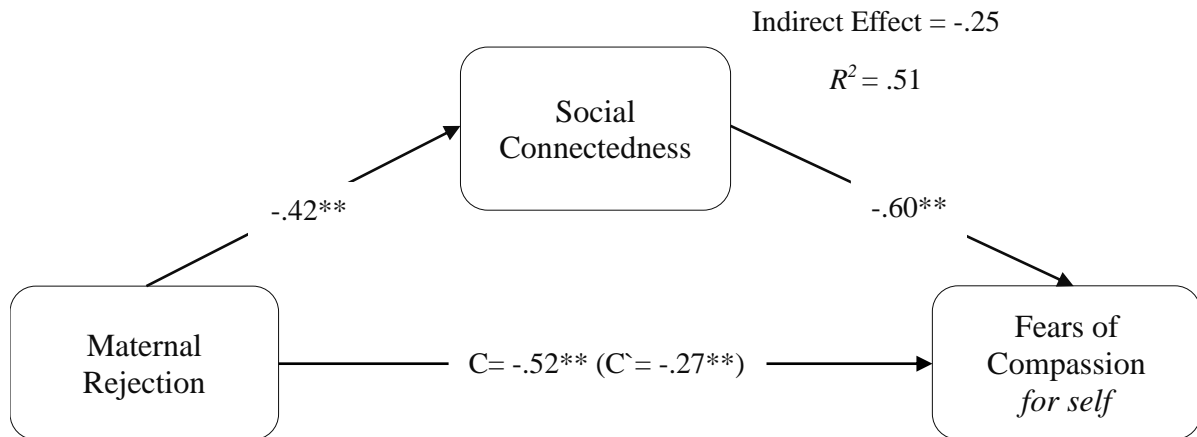


Figure 6.8. Paternal Rejection Predicts Fears of Compassion (*for self*) when Mediated by Social Connectedness.

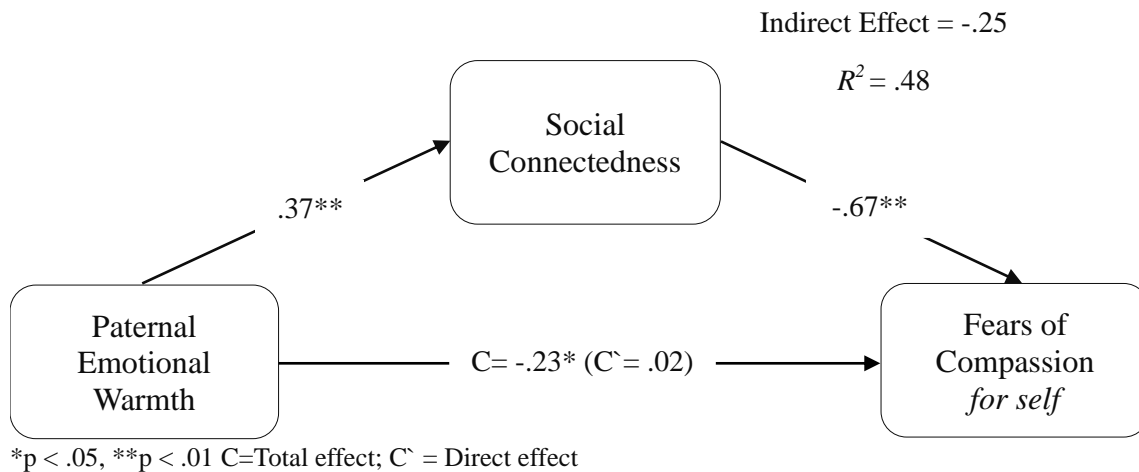
Maternal rejection predicted fear of compassion for self when social connectedness was used as a mediator. However, the total effect was statistically significant [$\rho = -.52$, $p > .001$], but although the direct effect reduced the strength of the association, the correlation [$\rho = -.27$, $p = .003$] remained significant. This is indicative of partial mediation, showing that part of the influence of maternal rejection on fear of compassion for self goes through the mediator of social connectedness. This means that social connectedness does not entirely account for the association between maternal rejection and fears of compassion for self. The results for the indirect coefficient were significant ($ab = -.25$, BCa CI $[-.403, -.110]$). The effect was of medium size, and social connectedness could account for 37% ($R^2 = .37$) of the variance in FCS for self. Therefore, higher levels of paternal and maternal rejection predict lower social connectedness and higher FCS for self.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

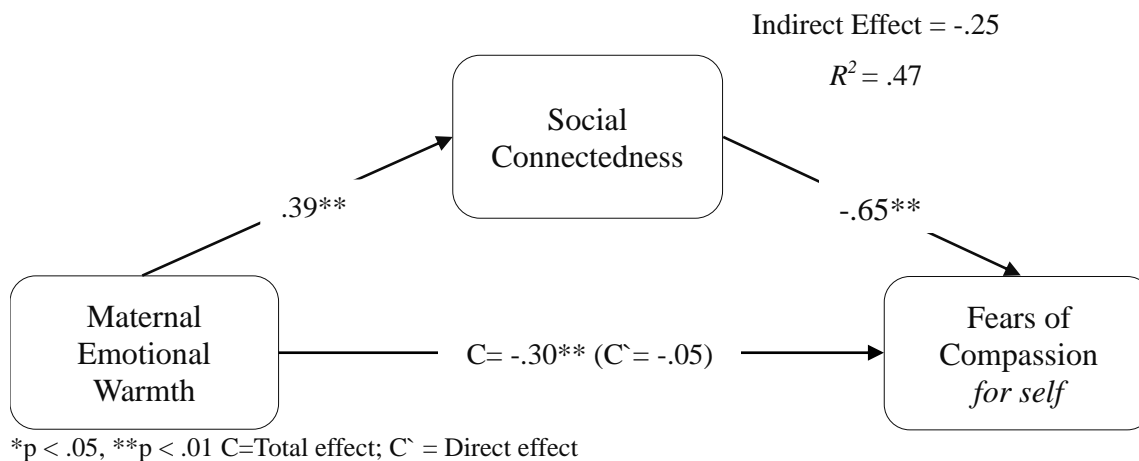
Figure 6.9. Maternal Rejection Predicts Fears of Compassion (*for self*) when Mediated by Social Connectedness

An association was found between parental emotional warmth and FCS for self when mediated with social connectedness. The paternal emotional warmth model involved full mediation (Figure 6.10), but in the case of maternal emotional warmth, the mediation effect was partial (Figure 6.11). The association between both paternal and maternal emotional warmth and FCS for self was fully mediated by social connectedness. When social connectedness was included in the model, the total effect was statistically significant, and the direct effect was not. The indirect effect for paternal and maternal emotional warmth was the same and was significant ($ab = -.25$). In the case of paternal emotional warmth, there was a medium effect size, and approximately 45% of the variance in FCS for self was accounted for by the predictors ($R^2 = .45$). With regard to maternal emotional warmth, approximately 47% of the variance in FCS for self was accounted for by the predictors ($R^2 = .47$). Therefore, when parental emotional warmth is high, then social connectedness is high, which, in turn, predicts lower FCS for self.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.10. Paternal Emotional Warmth Predicts Fears of Compassion (*for self*) when Mediated by Social Connectedness



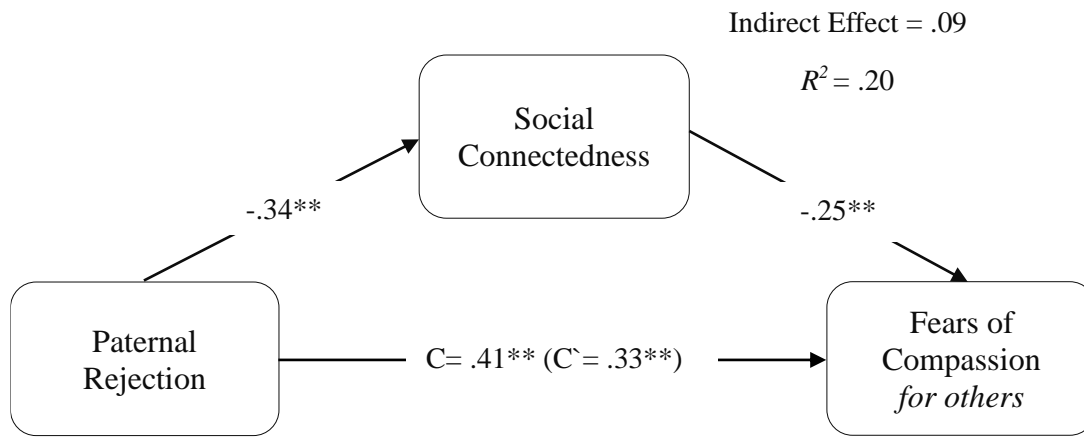
* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.11. Maternal Emotional Warmth Predicts Fears of Compassion (*for self*) when Mediated by Social Connectedness.

6.9.5.2. Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion For Others?

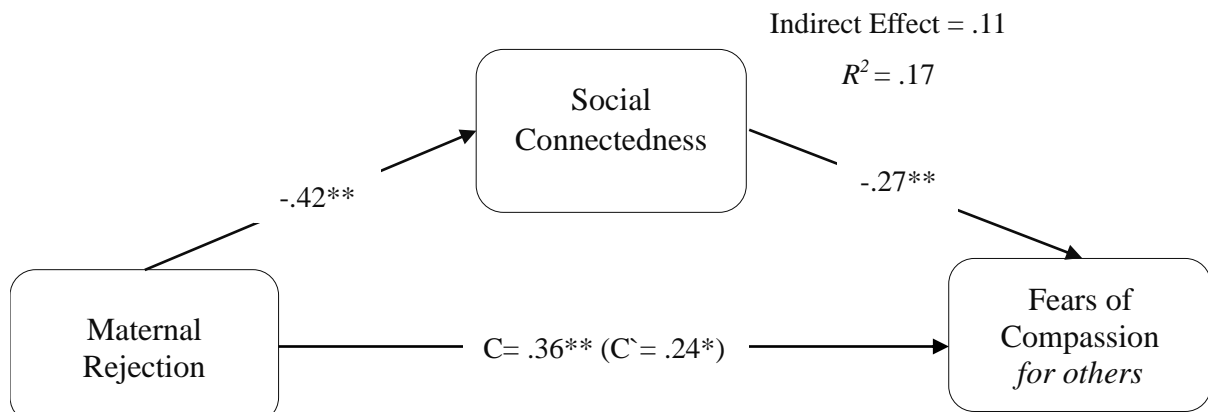
Parental overprotection was not found to be statistically significantly associated with FCS for others when mediated with social connectedness. However, an association was found between parental rejection and FCS for others when mediated with social connectedness. Both the relationships between paternal rejection (Figure 6.12) and maternal rejection (Figure 6.13) and FCS for others were partially mediated by social connectedness. When social connectedness

was included in the model, the total effect was statistically significant, and the direct effect also remained statistically significant. However, the indirect effects were significant in both cases ($ab=.09$; $ab=.11$, respectively). With regard to paternal rejection, the effect size was small, and approximately 20% of the variance in fear of compassion for others was accounted for by the predictors ($R^2=.20$). In the case of maternal rejection, approximately 17% of the variance in fear of compassion for others was accounted for by the predictors ($R^2=.17$). Thus, when parental rejection is high, then social connectedness is lower and this, in turn, predicts higher FCS for others.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.12. Paternal Rejection Predicts Fears of Compassion (*for others*) when Mediated by Social Connectedness

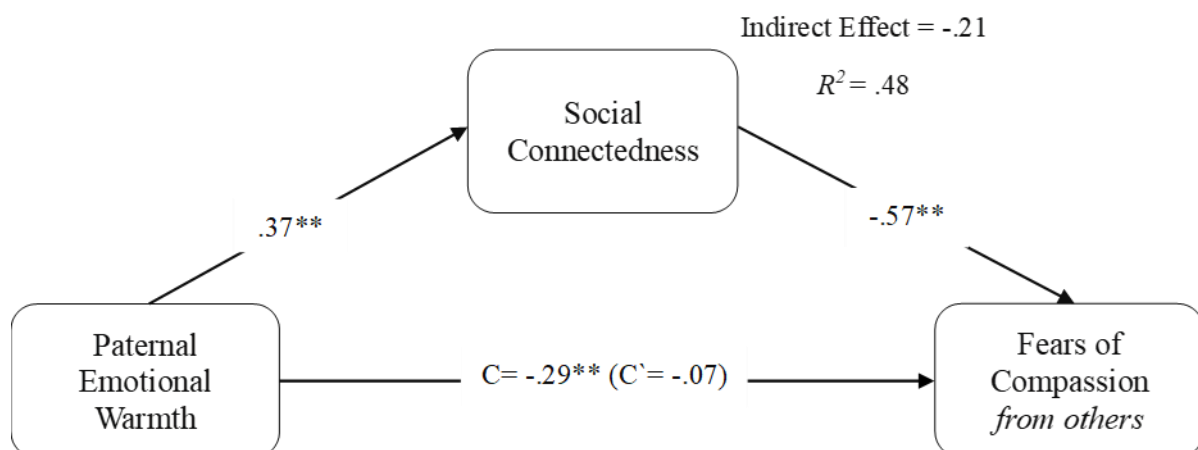


* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.13. Maternal Rejection Predicts Fears of Compassion (*for others*) when Mediated by Social Connectedness.

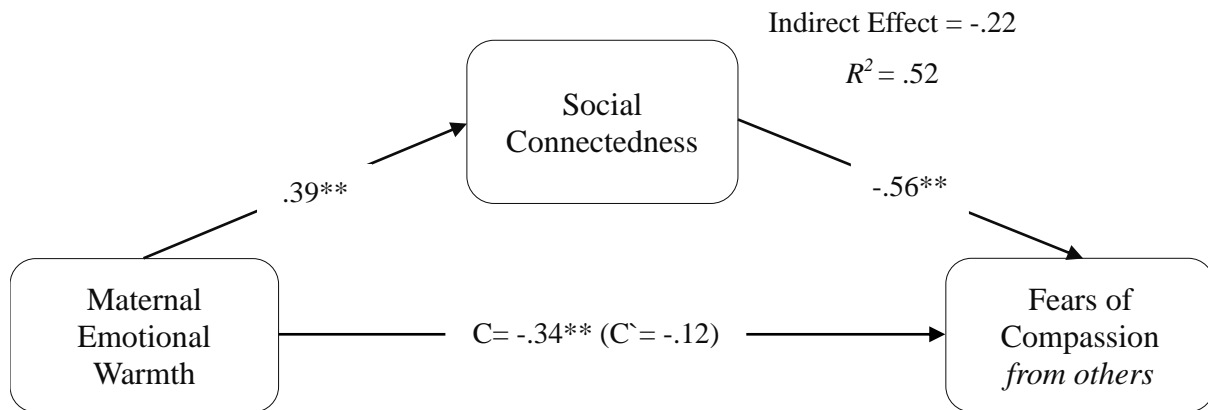
6.9.5.3 Does Social Connectedness Mediate the Relationship Between Parenting Received in Childhood and Fear of Compassion From Others?

As was the case with both FCS for self and for others, parental overprotection was not found to be statistically significantly associated with FCS from others when mediated with social connectedness. However, an association was found between emotional warmth and FCS from others when mediated with social connectedness. Both paternal emotional warmth (Figure 6.14) and maternal emotional warmth (Figure 6.15) were associated with FCS from others, and this relationship was fully mediated by social connectedness. Paternal emotional warmth had a significant indirect effect on FCS from others when mediated through social connectedness ($b=-.21$, 95% BCa CI [-.347, -.087]). The effect size was medium, and approximately 48% ($R^2=.48$) of the variance in self-compassion was accounted for by the predictors. Maternal emotional warmth also had a significant indirect effect on fear of compassion from others ($b=-.22$, 95% BCa CI [-.361, -.088]), with approximately 52% ($R^2=.52$) of the variance accounted for by the predictors. This shows that when both paternal and maternal emotional warmth is high, the feeling of social connectedness is lower, which in turn heightens the fear of receiving compassion from others.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

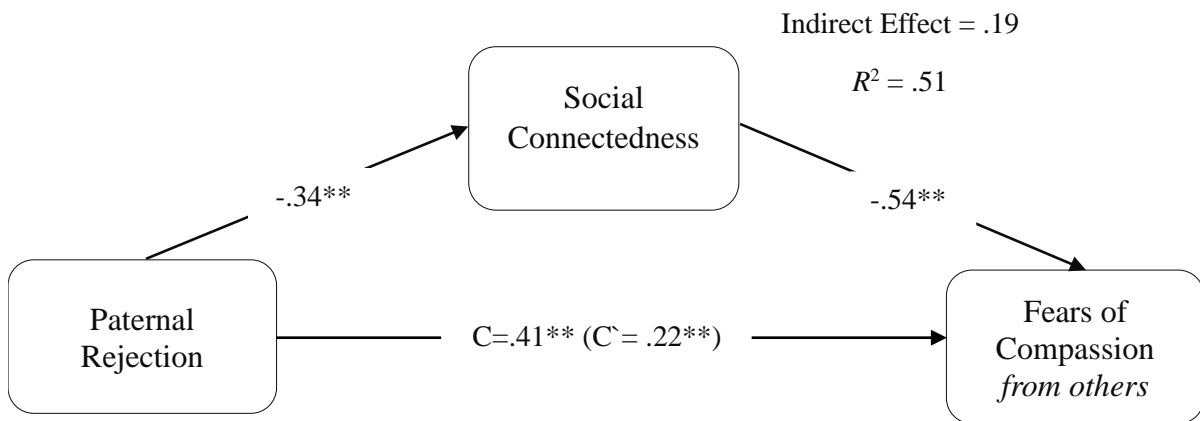
Figure 6.14. Paternal Emotional Warmth predicts Fears of Compassion (*from others*) when mediated by Social Connectedness.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

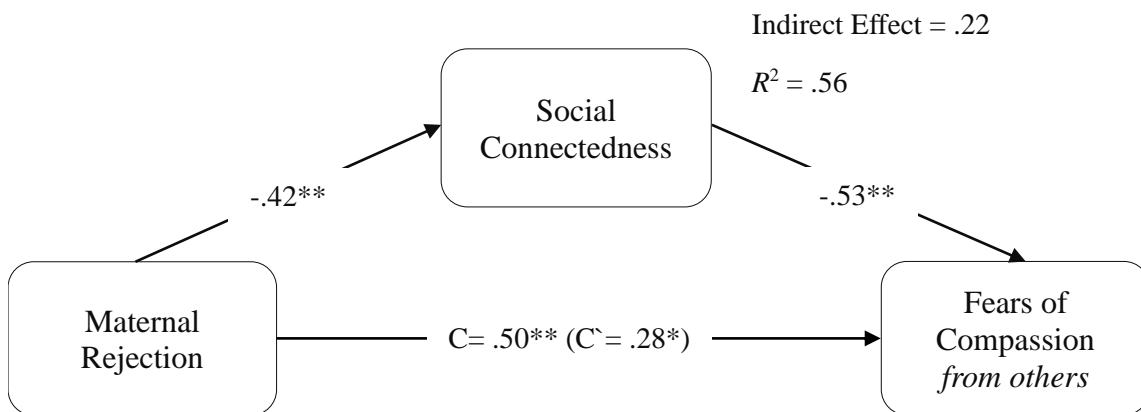
Figure 6.15. Maternal Emotional Warmth Predicts Fears of Compassion (*from others*) when Mediated by Social Connectedness.

Finally, the relationships between parental rejection and fears of compassion from others, mediated by social connectedness, were analysed. The results for paternal rejection (Figure 6.16) and maternal rejection (Figure 6.17) were similar. Partial mediation occurred when social connectedness is included in the model. As was the case with the previous partially mediated models, when the mediator - in this case, social connectedness - was introduced, the direct effect was statistically significant. Paternal rejection had a significant indirect effect on FCS from others when mediated through social connectedness ($ab=.19$, BCa CI [.055, .351]) and maternal rejection had a significant indirect effect on FCS from others when mediated through social connectedness ($ab=.22$, BCa CI [.094, .381]). The effect size for paternal and maternal rejection was medium and accounted for 51% ($R^2=.51$) and 56% ($R^2=.56$) of the variance, respectively. This demonstrated that when an individual indicated that they experienced high levels of rejection from their mother or father, this diminished their feelings of social connectedness and heightened their FCS from others.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.16. Paternal Rejection Predicts Fears of Compassion (*for others*) when Mediated by Social Connectedness.



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.17. Maternal Rejection predicts Fears of Compassion (*from others*) when Mediated by Social Connectedness.

Table 6.8 below, shows the results of the mediation analyses where social connectedness was the mediator.

Table 6.8 Results for the Mediation Analyses of Retrospective Parenting and Fear of Compassion for self, for others, and from others via Social Connectedness.

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients			Indirect Effect				
			Effect of IV on M (a)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Direct Effect of IV on DV (c')	Indirect Effect	95% CI [Lower,Upper]	R ²	Findings
Paternal Warmth →	Social Connectedness →	Fears of Compassion (Self)	.37**	-.67**	-.23*	.02	-.25	-.41, -.10]	.45	significant, full mediation
Maternal Warmth →	Social Connectedness →	Fears of Compassion (Self)	.39**	-.65**	-.30**	-.05	-.25	[-.41, -.11]	.47	significant, full mediation
Paternal Rejection →	Social Connectedness →	Fears of Compassion (Self)	-.35**	-.63**	.38**	.16	.22	[.07, .41]	.46	significant, full mediation
Maternal Rejection →	Social Connectedness →	Fears of Compassion (Self)	-.42**	-.60**	.52**	.27**	.25	[.12, .42]	.51	significant, partial mediation
Maternal Overprotection →	Soc. Connectedness →	Fears of Compassion (Self)	-.20	-.64**	.31*	.18*	.13	[-.06, .29]	.49	non-significant mediation
Paternal Rejection →	Soc. Connectedness →	Fears of Compassion (for others)	-.35**	-.25**	.41**	.33**	.09	[.02, .20]	.20	significant, partial mediation
Maternal Rejection →	Soc. Connectedness →	Fears of Compassion (for others)	-.42**	-.27**	.36**	.24**	.11	[.03, .23]	.17	significant, partial mediation
Maternal Overprotection →	Soc. Connectedness →	Fears of Compassion (for others)	-.20	-.29**	.35**	.29**	.06	[-.03, .15]	.18	non-significant mediation
Paternal Warmth →	Soc. Connectedness →	Fears of Compassion (from others)	.37**	-.57**	-.29**	-.07	-.21	[-.35, -.08]	.48	significant, full mediation
Maternal Warmth →	Soc. Connectedness →	Fears of Compassion (from others)	.39**	-.56**	-.34**	-.12	-.22	[-.36, -.09]	.52	significant, full mediation
Paternal Rejection →	Soc. Connectedness →	Fears of Compassion (from others)	-.35**	-.54**	.41**	.22**	.19	[.06, .35]	.51	significant, partial mediation
Maternal Rejection →	Soc. Connectedness →	Fears of Compassion (from others)	-.42**	-.53**	.50**	.28**	.23	[.09, .38]	.56	significant, partial mediation
Maternal Overprotection →	Soc. Connectedness →	Fears of Compassion (from others)	-.20	-.58**	.26*	.14	.11	[-.05, .26]	.52	non-significant mediation

p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Overprotection; Soc.Connectedness = Social Connectedness; SE = Standard Error,

CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M: Mediator = Social Connectedness; DV = Dependent Variable (Compassion)

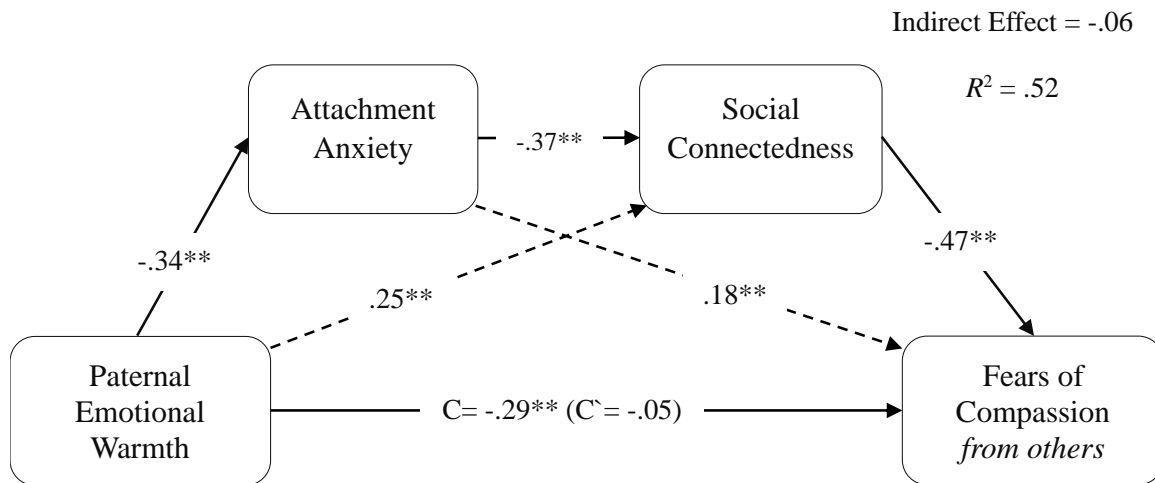
6.9.6. Research Question Six: Does Adult Attachment and Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour; where there is an Association Between Fears of Compassion and Adult Attachment and Social Connectedness?

A serial mediation was conducted with adult attachment and social connectedness as the mediators. All the correlations between perceived parenting during childhood and fears of compassion that were mediated by either adult attachment or social connectedness were tested. Seven models were run using Model 6 in Process (Hayes, 2017): maternal rejection via attachment anxiety to FCS for self, for others and from others; maternal rejection via attachment avoidance to FCS for self and from others; paternal rejection via attachment anxiety to FCS for self and from others.

A non-significant effect was only found for the relationship between paternal emotional warmth and FCS for self, when mediated by attachment anxiety and social connectedness. However, when paternal emotional warmth and FCS from others was mediated by attachment anxiety and social connectedness, the effect was small and negative, but, it accounted for 52% ($R^2=.52$) of the variance in FCS from others.

When the relationship between maternal rejection and social connectedness on FCS for others and from others was mediated by attachment anxiety, it had a small significant positive effect, but the results for the variance in FCS differed markedly. It accounted for 17% ($R^2=.17$) of the variance in FCS for others and 59% ($R^2=.59$) of the variance in FCS from others. When the relationship between maternal rejection and FCS for self was mediated by attachment anxiety and social connectedness, the effect size was small and accounted for 52% ($R^2=.52$) of the variance in FCS for self. Mediating the relationships between both maternal and paternal rejection, and FCS for self and from others, had a small significant indirect effect, with a

variance of 52% ($R^2=.52$) and 62% ($R^2=.62$), respectively. Of all the models for which a significant indirect effect on FCS was found, only the relationship between paternal emotional warmth and FCS from others showed a full mediatory effect (see Figure 6.18).



* $p < .05$, ** $p < .01$ C=Total effect; C' = Direct effect

Figure 6.18. Paternal Emotional Warmth Predicts Fears of Compassion (*from others*) when mediated by Attachment Anxiety and Social Connectedness.

Table 6.9 below, shows the results of the serial mediation analyses where adult attachment and social connectedness were the mediators.

Table 6.9 Results for the Mediation Analyses of Retrospective Parenting and Compassion *for self, for others, and from others* via Adult Attachment and Social Connectedness.

Independent Variable (IV)	Mediator Variable(s) (M)	Dependent Variable (DV)	Path Coefficients				Indirect Effect					
			Effect of IV on M (a)	Effect of M1 on M2 (d)	Effect of M on DV (b)	Total Effect of IV on DV (c)	Indirect Effect	SE	95% CI [Lower;Upper]	R ²	Findings	
Paternal E Warmth →	Anxiety → Soc Connectedness →	Fears of Compassion (Self)	-.34**	-.37**	-.60**	-.23*	.04	-.08	.03	[-.15, -.02]	.47	significant, full mediation
Maternal Rejection →	Anxiety → Soc. Connectedness →	Fears of Compassion (Self)	.39**	-.38**	-.55**	.52**	.25**	.08	.04	[.02, .18]	.52	significant, partial mediation
Maternal Rejection →	Avoidance → Soc. Connectedness →	Fears of Compassion (Self)	.24	-.32**	-.57**	.52**	.26**	.04	.03	[.00, .10]	.52	significant, partial mediation
Maternal Rejection →	Anxiety → Soc. Connectedness →	Fears of Compassion (for others)	.39**	-.38**	-.23**	.36**	.23*	.03	.02	[.00, .09]	.18	significant, partial mediation
Maternal Rejection →	Avoidance → Soc. Connectedness →	Fears of Compassion (for others)	.24*	-.32**	-.27**	.36**	.24*	.02	.02	[.00, .06]	.17	significant, partial mediation

p value = *p < .05, **p < .01

E Warmth = Emotional Warmth; Soc. Connectedness = Social Connectedness; Anxiety = Adult Attachment Anxiety; Avoidance = Adult Attachment Avoidance, SE = Standard Error, CI = Confidence Level; IV = Independent Variable (Perceived Parenting); M1: Mediator 1 = Adult Attachment, M2: Mediator 2 = Social Connectedness; DV = Dependent Variable (Compassion)

6.9.7 Summary of Results

For the sample population investigated in this study, parental emotional warmth and parental rejection had a significant bivariate correlation with FCS for self and from others. However, only parental rejection significantly correlated with FCS for others. Paternal overprotection significantly correlated with FCS for others, and maternal overprotection significantly correlated with all three flows of the fears of compassion. These correlations were analysed further.

The relationships between paternal emotional warmth and FCS for self and from others were mediated by attachment anxiety, as well as by social connectedness. The relationships between maternal emotional warmth and FCS for self and from others were only mediated by social connectedness. Paternal rejection and all three flows of FCS were mediated by social connectedness. With regard to the relationships between maternal rejection and FCS for self and from others, they were found to be mediated by adult attachment (anxiety and avoidance) and social connectedness, but the association between maternal rejection and FCS from others was mediated by attachment anxiety and social connectedness.

Serial mediation was run on the seven models that produced significant pathways for either attachment anxiety and social connectedness or attachment avoidance and social connectedness. Six of the models produced a significant indirect effect on FCS: maternal rejection and FCS for self, for others and from others, when mediated by attachment anxiety and social connectedness; maternal rejection and FCS for self and from others, when mediated by attachment and social connectedness; and paternal emotional warmth and FCS from others, when mediated by attachment anxiety and social connectedness.

Social connectedness had a stronger mediatory effect on the relationship between parental emotional warmth and rejection. The originality of the research described in this chapter so far is that, for the first time, attachment avoidance was found to have a mediatory effect.

6.10. Discussion

6.10.1 Overview

The main aims of this study were to investigate the relationship between parenting received in childhood and the fears of compassion (for self, for others, from others) and to explore whether attachment (anxiety and avoidance) and social connectedness are mediators of this association. Previous research has demonstrated that there is a link between perceived parenting during childhood and compassion. However, as was the case for the three orientations of compassion, no research to date has examined the relationship between perceived parenting during childhood and the orientations of compassion when mediated by adult attachment, nor the relationship between perceived parenting during childhood and the fears of compassion when mediated by social connectedness.

As previously stated, existing studies that have explored compassion and perceived parenting in childhood have mainly used Neff's (2003b) compassion model. The purpose of this study was to explore the relationship between perceived parenting and compassion and how resistance to being compassionate to oneself and others may be associated. Gilbert et al.'s (2011) Fears of Compassion Scale measures different flows of compassion, such as the giving and receiving of compassion from others and self-compassion, which complements the Compassionate Engagement and Action Scales (Gilbert et al., 2017) by measuring the same orientations of compassion. Research Questions 2 and 4 have previously been discussed in Chapter Four (see sections 4.10.3 and 4.10.5) using the same survey data and, therefore, are

not discussed here. A summary of the findings regarding the research questions about fears of compassion is provided and discussed below.

6.10.2 Research Question One: Are Fears of Compassion Related to Perceived Paternal and Maternal Behaviour?

This aim of this question was to establish whether the parental behaviour recalled during a person's childhood was related to fear of compassion in adulthood. Gilbert et al.'s (2011) Fears of Compassion Scale comprises three flows: fear of compassion for self; for others; and from others. The three scales allow different directional flows of fears of compassion that people experience to be examined, rather than just compassion towards oneself. It was predicted that both parental rejection and overprotection were likely to have a positive relationship with fears of compassion (high parental rejection is associated with greater fears of compassion); and that parental emotional warmth would have a negative association with fears of compassion (higher parental emotional warmth is associated with lower fears of compassion).

All the correlations between perceived parenting during childhood and fears of compassion were stronger for the mother than for the father. As predicted, parental overprotection had a positive effect on all three flows of fears of compassion. However, although maternal overprotection showed a statistically significant positive correlation for all three flows, only FCS for others was statistically significant in the case of paternal overprotection. This contrasted with the findings described in the previous chapter, which found no statistically significant correlation between parental overprotection and parental rejection. In addition, other studies that have examined the relationship between perceived parenting in childhood and self-compassion, have tended to combine the parenting behaviours rather than investigating paternal and maternal behaviour separately (Kelly & Dupasquier, 2015; Pepping et al., 2015)

The results of this study showed that there was a relationship between parental emotional warmth and fears of compassion, although it was only statistically significant for FCS for self and from others. Parental rejection was predicted to have a positive effect on a person's fear of compassion. The results obtained from the sample population studied were all statistically significant and positively correlated to a fear of compassion. The effect size indicated that this was the strongest relationship, with values of between $b=.29 - .47$, which is indicative of a medium strength association. This supports the idea that the opposite is true: when a person feels loved, accepted and valued by others, this is associated with the deactivation of the threat system and promotes feelings of safeness, as well as offering resources that are essential for coping strategies (Gilbert, 2010). Parenting from primary caregivers experienced during childhood tends to be internalised, which leads to an individual becoming either self-critical or self-compassionate in times of difficulty (Gilbert, 1989; 1995; 2005), depending on whether the experience was positive or negative. Those who have memories of rejection from their parents may experience heightened feelings of threat due to the activation of the threat system. It has been suggested that fears of compassion for oneself and from others are linked to self-criticism and difficulties in being self-reassuring or feeling safe, or developing a social safeness system (Gilbert et al., 2010; Gilbert et al., 2006; Gilbert et al., 2012). Therefore, if an individual has not received emotional warmth and experienced positive nurturing, they may not be able to self-reassure or receive reassurance from others, unlike those who have received emotional warmth from their parents and have learned coping mechanisms that can be used in times of need.

6.10.3. Research Question Three: Does Adult Attachment Mediate the Relationship Between Fears of Compassion and Perceived Parenting Behaviour, where there is an Association Between Compassion and Adult Attachment?

With regard to the sample population studied in Chapter Four, it was found that the mediation effect of adult attachment anxiety on the relationship between maternal rejection and self-compassion accounted for 28% of the variance in self-compassion. In this chapter, the mediatory effect of adult attachment anxiety on the relationship between maternal rejection and fears of compassion also accounted for 28% of the variance in FCS for self and 38% of the variance in FCS from others. For some individuals, compassion can lead to avoiding or fearing reactions to compassion (Gilbert, 2010). The high variance percentages could be explained by the responses of those individuals who received little affection from their parents or even abusive parenting. Attachment security enables individuals to feel comfortable with closeness and dependence on one another (Hazan & Shaver, 1987). However, those who perceive their parenting as distant and thus become insecurely attached may, as Gilbert (2005) suggests, internalise these feelings, which can lead to an individual becoming self-critical in times of difficulty.

Those who are highly self-critical can find developing self-compassion difficult (Gilbert & Procter, 2006; Rockcliff et al., 2008). This could make it uncomfortable, or even threatening, for them to receive compassionate emotions from themselves or from others (Rockcliff et al., 2008), and consequently, these individuals tend to develop a fear of compassion (Gilbert et al., 2011; Mikulincer & Shaver, 2007). This may be the case for the sample population in this study, as the mediatory effect of attachment anxiety was only partial in the case of both compassion for self and from others. The phenomenon of finding it difficult to receive compassion from

oneself and from others could explain why a substantial correlation between maternal rejection and FCS for self and from others remained, after attachment anxiety was added to the model.

The bivariate association between attachment avoidance and compassion was positively associated with fears of compassion both for oneself and from others, meaning that when attachment avoidance is high, there is a greater fear of compassion for self and from others. With regard to maternal rejection, when the relationship between maternal rejection and fears of compassion for self and from others was mediated by attachment avoidance, the mediation effect was partial. Some individuals react to compassion with avoidance or even fear (Gilbert, 2010). This may explain why those individuals with a high level of attachment avoidance are very self-reliant and actively resist developing intimacy (Mikulincer & Shaver, 2007). These results may explain why attachment avoidance also partially mediated the relationship between maternal rejection and fear of compassion from others.

Paternal emotional warmth had a significant negative relationship with fears of compassion for self and from others. This demonstrates that if a parent - in this case, the father - is emotionally warm and nurturing, that can help to create a secure base attachment in childhood. Therefore, it is less likely that an individual who has received emotional warmth from their parents will have a fear of compassion for self and from others. However, when attachment anxiety was added to the relationship between paternal emotional warmth and fears of compassion from others, it did not fully mediate the relationship. This may be because, when a father is emotionally warm, it has a greater influence on whether a person experiences fear of compassion, which supports the theory that compassion or fear of compassion is influenced by self-internalisation.

With regard to the relationship between parenting perceived in childhood and fears of compassion for self and from others, when mediated by adult attachment, the results demonstrated that perceived parenting has a long-lasting influence on a person, and hence on individual differences in compassion and, in turn, the development of fear of compassion. Although attachment anxiety and avoidance did mediate some of the relationships with fears of compassion, they did not significantly mediate the relationship between any of the perceived parenting styles and fears of compassion for others. As Gilbert et al. (2011) suggest, it could be that compassion for oneself and compassion from others operate through different processes to that of compassion for others. This may also be the case in relation to the three flows of fears of compassion.

6.10.4 Research Question Five: Does Social Connectedness Mediate the Relationship Between Fears of Compassion and Perceived Parenting Behaviour; where there is an Association Between Compassion and Social Connectedness?

This study is the first to explore the relationship between perceived parenting in childhood and fear of compassion when mediated by social connectedness. As previously reported, social connectedness was not a significant mediator of the relationship between overprotection and fears of compassion.

Social connectedness develops in early life and throughout an individual's lifespan (Baker & Baker, 1987; Lee & Robbins, 1995). Unlike adult attachment, social connectedness partially mediated the relationship between paternal and maternal rejection and fears of compassion for others, albeit that there was only a small positive effect [$ab=.09$, BCa 95% CI .018, .197; $ab=.11$, BCa 95% CI .029, .235 respectively]. Both parental rejection and fear of compassion for others negatively and significantly correlated with social connectedness. This aligns with

the findings from the attachment literature which suggest that insecure attachment in childhood can be linked to problems developing empathy and care for others (Mikulincer et al., 2005). Those who develop a low sense of connectedness in childhood are sensitive to what they perceive as threats against their self-esteem and protect their fragile selves by distancing themselves from others (Lee & Robbins, 1995). In this study, as mentioned previously, those who had experienced insecure parenting were found to have higher levels of fear of compassion than those who perceived their parenting as secure.

The relationships between maternal rejection and fear of compassion for self, and between parental rejection and fear of compassion from others, were partially mediated by social connectedness. These results are similar to those found regarding fear of compassion for others, i.e., that insecure parenting had a more significant effect on an individual's level of fear of compassion, and that the mediating effect of social connection did not nullify the link between maternal rejection and fear of compassion for self. Although the relationship between paternal rejection and fear of compassion for self was not mediated by adult attachment, it was fully mediated by social connectedness. This could suggest that if an individual perceives their father as having rejected them when they were a child, their sense of social connectedness could diminish the degree of fear of compassion that they felt towards themselves. This effect is much stronger, as well as being negative (paternal effect $b = -.63$), than in the case of maternal rejection ($b = -.25$) where social connectedness only acted as a partial mediator. Therefore, it could be that individuals who perceived their mother as rejecting them found it more difficult to change their 'internal workings' (Bowlby, 1969), even with the validation of a greater sense of social connectedness when they grow older.

The relationships between parental emotional warmth and both fears of compassion for self and from others were fully mediated by social connectedness. In fact, these mediatory effects

were the strongest significant indirect effect results produced out of all the analyses. The relationship between parental emotional warmth and social connectedness had a strong positive association, and that between social connectedness and fears of compassion for self and from others had a strong negative association. This could be due to the early years being essential for creating a sense of belonging with a secure attachment base and the ability to build an internalised positive sense of self-worth on that foundation in adulthood. This combined sense of self-worth would have an even greater influence on a person's level of fears of compassion and how they receive compassion for themselves and from others.

6.10.5. Research Question Six: Does Adult Attachment and Social Connectedness Mediate the Relationship Between Fears of Compassion and Perceived Parenting Behaviour where there is an Association Between Compassion and Adult Attachment and Social Connectedness?

The relationships between paternal emotional warmth and fear of compassion for self and from others had a significant indirect effect with both mediators - attachment anxiety and social connectedness - but they did not account for all of the indirect effects. When a serial mediation was run, a small significant indirect effect was found via attachment anxiety and then social connectedness. However, these only accounted for a small proportion of the total indirect effect. The relationship between maternal rejection and fears of compassion for self and for others was strongly mediated by social connectedness alone. However, this only accounted for about half of the total indirect effect. When a serial mediation was run, a significant indirect effect was also found via attachment anxiety and then social connectedness.

Of the six serial mediation models that showed a significant indirect effect, all of these were small effects: for example, when the relationship between emotional warmth and fear of compassion from others was fully mediated by attachment anxiety and social connectedness,

the effect was small and negative ($IE = -.06$), meaning that paternal emotional warmth reduces the fear of receiving compassion from others via attachment anxiety and social connectedness. However, the variance in fear of receiving compassion from others was 56% ($R^2 = .523$), which suggests that the interaction between attachment anxiety and social connectedness balances the mediatory effect. The bivariate correlation between them was as follows: $b = -.37$, $p \leq .01$. It has been theorised that the security of friendships predicts interpersonal functioning in romantic relationships (Gillath et al., 2016). However, it is less clear how attachment anxiety influences social connectedness. Of all the models examined in the last three chapters, maternal rejection and fears of compassion for self and from others were the only models for which a significant mediatory effect via attachment avoidance was found.

6.11. Summary

Maternal parenting had a stronger association with fears of compassion than paternal parenting. Neither maternal nor paternal overprotection had a significant association with fears of compassion. The aims set out in this chapter were addressed, and the directions of association (negative and positive) were as predicted. Research Question One was designed to examine the relationship between perceived parenting in childhood and the three flows of fears of compassion. The findings indicated that there was a negative correlation between parental emotional warmth and fear of compassion, and a positive correlation between parental rejection and overprotection, as predicted. However, overprotection was not significantly correlated with all three orientations of fears of compassion. Research Question Two involved examining the relationship between perceived parenting in childhood and fears of compassion when mediated by adult attachment. Only the relationship between maternal rejection and fears of compassion for self and others was found to be mediated by attachment avoidance. Attachment anxiety significantly mediated the relationship between paternal emotional warmth and all orientations

of fears of compassion (negatively), and between maternal rejection and all orientations of fears of compassion (negatively).

Research Question Five examined the relationship between perceived parenting in childhood and fear of compassion when mediated by social connectedness. The study showed that the relationship between perceived parenting in childhood and fears of compassion, when mediated by social connectedness, was statistically significant apart from in the case of parental overprotection. Finally, Research Question Six was intended to determine whether both adult attachment and social connectedness played mediating roles in the relationship between parenting in childhood and fear of compassion. Both were found to be mediators and accounted for some of the variance in fear of compassion. It appears that social connectedness had a greater mediatory effect on fear of compassion than adult attachment. However, they both mediated the relationship. It is worth noting that self-compassion and fears of compassion might operate in different ways as the results of the models were not polar opposites.

6.12. Limitations, Strengths, and Future Research

The findings of this chapter have further extended the understanding of the relationship between perceived parenting behaviour and the flows of fears of compassion. As previously mentioned, most studies examined in the literature review in Chapter Two used the SCS (Neff, 2003a) as a measure of compassion. The CEAS is a relatively new measure that enabled the further exploration of self-compassion, along with giving and receiving compassion. Additionally, using the FCS (Gilbert et al., 2011) to measure fears of compassion allowed the associations between fears of compassion and perceived parenting to be explored in order to find out whether consistent associations would emerge and how adult attachment and social connectedness might influence the relationship.

It is worth noting that attachment anxiety and social connectedness played a mediating role between maternal rejection and all three of the flows of fears of compassion, a finding which is discussed in detail in the discussion chapter. However, these were partial mediating relationships, which suggests that the relationship between maternal rejection and fears of compassion could only be partially explained by the influence of attachment anxiety and social connectedness. In other words, there may be other unique elements that have an effect, and that are not accounted for in the study. Because this study used a cross-sectional design, causality between the study variables cannot be determined. Therefore, in order to acquire a greater understanding of the precise relationship between these variables and to evaluate the pathways identified, further research may be required.

6.13. Summary of the Mediation Models

The studies described in the last three chapters, that have run the mediation models using the SCS, CEAS and FCS, have found evidence of partial and full mediations. When taken together, these findings can make important contributions to enhancing understanding of individual differences in compassion. Such findings have particular relevance to understanding the capacity for compassion. How a person relates to themselves and the world around them may be influenced by their level of compassion. Compassion appears to be malleable; therefore, it may be possible for a person's capacity for compassion to change. Online compassion mind training exercises could offer a means of increasing an individual's level of compassion. The next chapter describes an intervention study designed to establish whether such exercises can increase compassion.

CHAPTER SEVEN

The Intervention Study

7.1 Introduction

7.1.1 Chapter Overview

The aim of this chapter is to conduct an intervention study and determine whether the intervention improves compassion. The rationale for the study and the aims are first outlined. The method section explains how the data analysis is conducted, and the results section describes the findings obtained using the measures and the analysis conducted. Finally, the discussion section evaluates the intervention's findings and whether the intervention improved the participants' levels of compassion. The strengths and limitations of the study and recommendations for possible future research are then discussed.

7.1.2 Previous chapters

It has been shown in previous chapters that self-compassion and compassion given to others and received from others are associated with perceived parenting in childhood and adult attachment and social connectedness. It was found that adult attachment, particularly anxiety and social connectedness, also mediated the relationship between parenting and fear of compassion, highlighting the fact that there were blocks to compassion and individual differences in compassion. As compassion appears to be malleable, individual differences and blocks to compassion may alter a person's internal working models. This means that a person's level of compassion can influence how they relate to themselves and the world around them. It has been argued in previous chapters that parenting styles may have an impact on a person's propensity to improve their level of compassion for themselves. The study in this chapter could help to understand these relationships further by conducting an intervention designed to

establish whether those with memories of poor parenting styles, poor adult attachment and low feelings of social connectedness have the capacity to increase their self-compassion.

7.1.3 Background

7.1.3.1 Increasing Compassion

Recently, there has been a growing interest in strategies that increase the development of self-compassion. These strategies designed to increase compassion may help individuals to protect themselves against, or help to manage, psychopathologies, such as depression and anxiety disorders (Gilbert, 2009; Gilbert, 2010; Gilbert & Irons, 2005; Gilbert & Procter, 2006; Hackmann, 2005). Evidence from the literature suggests that self-compassion may be adaptable (Neff et al., 2007; Narvaez, 2017). Humans are social beings, and, depending on their relationships with others throughout their lifespan, their capacity for compassion may update their working models of self-to-self relating. This, in turn, facilitates self-compassion (Bowlby, 1988).

Compassion Mind Training practices that help individuals to develop their compassion can be delivered online via a guided audio file, whereby an individual can listen and learn how to cultivate compassion. It is a convenient way for an individual to practice and build on compassion as they can choose the time and place that they practice. This chapter intends to explore the capacity of individuals to increase their self-compassion, compassion for others and compassion from others. The study also aims to evaluate the feasibility of the roles played by parenting styles, adult attachment and social connectedness in this relationship.

7.1.4 Rationale for this study

It has been argued in most of the previous chapters that some parenting styles directly affect self-compassion and that attachment anxiety and social connectedness go some way towards explaining the relationship between them. It may therefore be worthwhile to conduct a small study (pilot study) using an audio intervention to discover whether self-directed interventions can increase self-compassion scores for those within a particular range in regard to perceived parenting, attachment anxiety and social connectedness.

Increases in compassion may differ for participants with high or low attachment anxiety and attachment avoidance or secure attachment, social connectedness, and parental styles (rejection, emotional warmth and overprotectiveness). The Compassionate Engagement and Action Scales (for others, from others and self-compassion) (Gilbert et al., 2017) and the SCS (Neff, 2003a) are used to measure participants' levels of compassion before and after the practice of compassion inventions. Although the Self-Compassion Scale (Neff, 2003b) is the main instrument for measuring self-compassion, and is widely used in the self-compassion literature, the CEAS, a relatively new measure, also includes measures of compassion for oneself. Both scales (SCS and CEAS) can be used to measure any increase in compassion after the intervention/daily practice of compassion. Not only are these scales able to measure any change in compassion levels, but they can also measure what influences parenting behaviour, adult attachment style and social connectedness have on possible changes in or barriers to compassion after the intervention. However, the goal of a pilot study is not to test hypotheses about an intervention's effects but to assess whether a larger study would be worth conducting to extend the understanding of the findings produced in this thesis. Hence, this study is exploratory in nature.

7.1.5 Aims and Objectives

This chapter explores whether levels of compassion increase, following an online compassion intervention and whether perceived parenting, attachment style and social connectedness affect a person's ability to change their level of self-reported compassion. For example, if an individual perceives their father as having high emotional warmth, their level of compassion may change to a greater extent than someone who perceives their father as lacking emotional warmth. Hence, an individual may be able to increase their self-compassion even they have varying scores on perceived parenting, adult attachment and social connectedness. Due to its exploratory nature, this chapter also considers if any outcome patterns or trends can be observed among the individuals' scores. It may help to enhance the understanding of how adult attachment and social connectedness contribute to the parenting-compassion dynamic.

7.2 Method

7.2.1 *Study Design*

Due to the exploratory nature of this study, a case series design was used. The case series is a descriptive research design which is useful for evaluating an intervention that can help to formulate new hypotheses for further and more rigorous research. A new intervention approach usually starts with feasibility studies, such as case studies (Kirby et al., 2017). Case series often use questionnaires to determine if they share common features, unlike a single case study that cannot be used to make comparisons (Bowling, 2009, p.76). However, the case series design cannot make causal inferences (Green et al., 2022).

This study measures the outcome of a brief intervention delivered via a self-directed online audio clip of a compassion intervention. Using a descriptive research design, the aim was to identify characteristics, categories and trends, in the hope that it would reveal something new

about the research problem addressed in the previous chapters, and to find out whether any patterns emerged.

7.2.2. Participants

7.2.2.1 Participant Eligibility

Both men and women were invited to participate in the study. Due to the online nature of the study, participants were unlikely to be solely from the United Kingdom. Those included were aged 18 years or over at the start of the study and had sufficient English to understand the questionnaires.

7.2.2.2 Participant Recruitment

Participants were recruited from a community sample that included university students, contacted through mailing lists (university departments), social media networks (i.e. Facebook, Twitter) and internet forums. A snowball sampling method was used to reach as many participants as possible. The first questionnaire was completed via an online survey hosted by Qualtrics, which included a link to the audio file to be downloaded from the designated website. After they had listened to the audio file over a period of two weeks, a link to the second questionnaire (post-intervention) was sent via email for the participants to complete. Those who completed the two-week intervention received a £10 Amazon gift voucher after returning and completing their post-intervention questionnaires.

7.2.2.3 Participant Procedure

Before commencing the questionnaire, those participants who had provided their consent electronically were advised that they could withdraw from the study at any time or leave any questions unanswered without specifying a reason. They were also advised that, after they had

submitted their responses, they could contact the researcher at any time to ask for their data to be removed via the same email address supplied on the surveys. This information was detailed in the Participation Information Sheet at the beginning of the questionnaire (see Appendix Q). They were also asked to confirm their eligibility and consent to participate (see Appendix I).

After the participants had completed the questions, a final page informed them that, if taking part in the survey had caused them any discomfort or mixed feelings, they could contact one or more of the organisations listed for further support and advice (see Appendix J). Once they had completed the initial (first) online survey, they were directed to a link which enable them to play the compassion audio file. They were required to play the audio file daily for a period of 14 days. After 14 days, a reminder was sent to each participant with a link that enabled them to complete the follow-up online survey via the email address provided in the first survey.

7.2.3 Measures

The measures used in this study are the same as those used in the studies described in previous chapters, with the inclusion of the link to the Compassion-Focused Audio Intervention. Further descriptions are provided below:

7.2.3.1. Demographic Information (see Appendix D)

The demographic information for this study was gathered by asking participants questions about their age, gender, marital status, education level, current employment, and ethnicity. The first demographic questions were the same as for the previous studies (see Appendix D). After the intervention, the demographic questions were asked again, with two additional questions pertaining to their audio activities over the previous two weeks (see Appendix P).

7.2.3.2 Self-Compassion: Self-Compassion Scale (SCS) (Neff, 2003b) (see Appendix G).

The SCS consists of 26 questions and is designed to assess self-compassion. Each question is measured on a 5-point scale ranging from ‘Almost never’ to ‘Almost always’. For this study, a total score for self-compassion is used.

7.2.3.3 The Compassionate Engagement and Action Scales (CEAS) (Gilbert et al., 2017) (see Appendix C).

The CEAS measures three aspects of compassion: compassion for others; compassion received from others; and self-compassion, scored on a 10-point Likert scale, with higher scores indicating greater compassion. The total score for each scale is used.

7.2.3.4. Perceived parenting received in childhood: Short Form Egna-Minnen Beträffande Uppfostran - s-EMBU (Arrindall et al., 1999) (see Appendix A).

A short form s-EMBU measures adults’ perceptions of their mother’s and father’s parenting and how they were raised. Rejection, overprotection and emotional warmth are assessed for each parent. It measures these on a 4-point Likert scale, with a low score indicating more positive experiences of parenting.

7.2.3.5 Attachment: Experiences in Close Relationships Scale (Revised)- ECR-R (Fraley et al., 2000) (see Appendix E).

The ECR-R measures adult attachment, using the subscales of Anxiety and Avoidance. Participants are asked about how they generally experience relationships and are required to rate them on a 7-point Likert scale: low scores on both subscales indicate secure attachment.

7.2.3.6 Social Connectedness: The Social Connectedness Scale (Revised) (Lee, Draper & Lee, 2001) (see Appendix F)

The Revised Social Connectedness Scale measures how individuals perceive their connection to themselves and those around them. Higher scores on the 5-point Likert scale indicate a stronger sense of connectedness.

7.2.3.7 Compassion-Focused Audio Invention: (see appendix R)

The guided pre-recorded compassion audio file entitled, “Building the compassionate self”, was used by the participants daily over a 14-day period as the intervention designed to improve compassion. The duration of the recording is 13 minutes and 7 seconds. The audio file is freely available from the Compassionate Mind Foundation, by Paul Gilbert, available at (July 2023): <https://soundcloud.com/compassionatemind/building-the-compassionate-self/s-c7EQJ?in=compassionatemind/sets/compassionate-minds>.

7.2.4 Ethical Considerations

7.2.4.1 Consent

The study participants were recruited from an adult community sample; therefore, it was sufficient to obtain ethical approval from The University of Essex Ethics Committee before conducting the study. The study was conducted in line with ethical requirements to ensure that participants’ rights and dignity were protected and any harm avoided. A participation information sheet (see Appendix I) provided all potential participants with details about the study, explaining what was involved in participating, their eligibility for participation, how they could provide their consent to participate and making them aware of their right to withdraw from the study if they wished. Participants were required to provide their consent to participate before proceeding to the pages containing the questions comprising the online survey. The use

of radio buttons or checkboxes allowed participants to indicate that they had read and understood the consent information, provided their agreement to participate, and made them aware that they could withdraw at any stage if they wish to do so. Participants who decided to withdraw after submitting their responses were informed that they could send the researcher an email requesting the removal of their data.

7.2.4.2 Confidentiality / Anonymity

If participants wish to be informed of the study results, they were given the option to check a box in the online survey giving permission to use their email address so that the researcher could send them the results of the study. This was kept separate from any personal data identifiable to that individual. Participants were assured of their anonymity and confidentiality when completing the questionnaire. They were also informed that emails would be deleted immediately after the dissemination of the study results.

7.2.4.3 Data Access, Storage and Security

The information was anonymised, which meant that no data was identifiable to a particular individual other than an email address. Each email address was allocated a participant number so that the second questionnaire could be matched with the first questionnaire for the purpose of comparing the data. The data collected in SPSS was password protected and encrypted, and both supervisors had access to the anonymised data.

7.2.4.4 Risk and Risk Management

The study involved questions asking participants about memories of and events in their childhood and how they feel about those memories. In some cases, this may have resulted in the recall of distressing events that had happened to the participants in the past and their feelings

about those events. They may therefore find answering some of the questions difficult and upsetting. Participants were also reminded that they could discontinue their participation and withdraw from the study at any point without explanation. Anyone who reported distress would be advised to contact their general practitioner, health professionals or other appropriate organisations for advice and support. The debrief sheet (see Appendix J) included advice for participants about how and where to seek advice and information if they should need to. They were encouraged to contact the researcher if they wanted to provide feedback after completing both questionnaires.

7.2.5 Planned Analysis

After each participant had submitted their responses to the first part of the study, the survey results were allocated a number corresponding to the participant's email address. The data were exported from the Qualtrics online survey website into the IBM program, SPSS version 29.0 software. After 14 days had passed from the participant's initial survey submission, the follow-up (second) survey was exported from the Qualtrics online survey website into the IBM program SPSS version 29.0 software. The data was cleaned before the analysis was conducted, and any missing data in the survey was replaced with the discrete value of '999'. As explained in previous chapters, both parts of the study were designed to prompt the participants in cases where a question may have been missed, to avoid questions being omitted accidentally. The exception to this was the online s-EMBU survey, which did not prompt missing questions so as to enable participants to leave questions that did not apply to them, such as those about caregivers or siblings, unanswered.

7.2.6. Statistical Analysis

The statistical analysis was run to determine if there was a difference in the data between the two-time points (data from survey 1 and survey 2) for each compassion scale (SCS and CEAS). The Leeds Reliable Change Indicator is a basic Excel application that analyses changes in and the magnitude of pre- and post-treatment scores. The effect size determines the strength of the association, if one exists.

7.2.7. Reliable Change Index and Clinical Significance Analysis

The Reliable Change Index (RCI) is a psychometric criterion that evaluates whether there is a difference between two measurements of an individual's score over time (Guhn et al., 2014). If the RCI obtains a result of greater than +/- 1.96 standard deviations for a participant, it can be concluded with a probability of $p < .05$ that the change is reliable and not a result of unreliable or indeterminate change. The reliable change (RC) is a pre-requisite for determining clinical significance. Clinical significance refers to the practical value, or how important the effect is in a clinical sample after an intervention (Sharma, 2021). However, as the compassion measure is not considered a clinical measure, only the reliable changes pre- and post-intervention are explored.

7.2.8 Descriptive Statistics and Categorical ranges

Each measure used in the intervention study was independently categorised to determine the criteria for those in either the high or low groups. The average score of the measure is presented for each participant.

7.2.8.1 Compassion scales

Neff (2003b) states that, as a guideline for the SCS, the average score on the SCS Likert scale is around 3.0. She categorises the SCS scores into high (3.5-5.0), moderate (2.5-3.5) and low (1-2.5). However, to enable clearer reporting of the data, this study divides the data into two groups: high compassion (3.0 and above); and low compassion (under 3.0). For the three CEAS scales (compassion for self, for others, from others), the Likert scale ranges from 1 – 10; the higher scores relate to higher levels of compassion. The average score for this measure is 5.5, and therefore, the categories for the low group on the CEAS scales are ≤ 5.5 and for the high group >5.5 .

7.2.8.2 Perceived Parenting in Childhood

The s-EMBU is scored on a Likert scale ranging from 1– 4, with four indicating a high level in relation to the perceived parenting style (Rejection, Overprotection, Emotional Warmth). All the paternal and maternal parenting styles were categorised using the average score of ≤ 2.5 for low scores and >2.5 for high scores.

7.2.8.3 Adult Attachment

The ECR-R measure scores ranging from 1-7, with higher scores associated with higher levels of anxiety and avoidance. The average score for this scale is 4.0, with ≤ 4.0 indicating that an individual is low in terms of attachment anxiety and avoidance and >4.0 representing a high level of adult attachment and avoidance.

7.2.8.4 Social Connectedness

The Social Connectedness Scale is measured on a 6-point Likert scale. The authors - Lee, Draper and Lee (2001) - consider a mean item that scores equal to or greater than 3.5 as

indicative of a tendency to feel socially connected. Therefore, these criteria are followed in this study.

7.3 Results

7.3.1 Overview

The study results are reported and the sample described in terms of numbers, demographic information, and participants' scores for compassion, perceived parenting, adult attachment and social connectedness pre- and post-intervention. A visual representation in the form of a scatterplot of the Leeds RCI (Morley & Dowzer, 2014) for each compassion measure can be found in Appendix S. The findings for each participant are reported as a series of individual cases.

7.3.2 Descriptive analysis

A total of 47 participants started the survey, but all those who completed only the first survey were removed from the analysis (n=32). The remaining 15 participants consented to completing both surveys (part 1 & part 2). The participants completed all of the measures pre- and post-intervention except for one participant who did not complete the adult attachment measure. The audio file ran for 13 minutes and 7 seconds; however, not one of the fifteen participants completed the task as requested. Figure 7.1, below, displays the time spent by each participant listening to the audio file. The findings of any reliable changes are reported using the Leeds calculator in Excel. The descriptions of the post-intervention changes at individual participant level are also reported.

Table 7.1 Participants' Average Listening Times for the Audio Intervention

Participants	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Length (mins)	4	5	10	13	30	3	12	10	10	2	3	20	1	20	30
No. Days	2	14	6	2	12	14	8	5	6	10	14	3	15	4	4

7.3.3 Demographic Characteristics

Full demographic information about the participants can be found in Appendix T. The demographic information contained no missing data. There were no consistent changes or differences in the participants' demographic information during the time that elapsed between completing both surveys. The mean age of the participants was 31.47 years, 53.3% were female ($n=8$), 46.7% were male ($n=7$); all of the 15 participants' ethnicity was white British, and they all lived in the United Kingdom; 53.3% ($n=8$) had a degree or higher degree; 46% ($n=7$) were students; and 53.3% ($n=8$) reported their relationship status as being single or never married.

7.3.4 Participants

In Appendix U, the average scores of the measures are presented for each of the participants pre- and post-intervention.

Participant 1 was a 24-year-old single female, educated to degree/higher degree level and self-employed. She perceived her parenting in childhood to be low in terms of paternal and maternal rejection. Her paternal emotional warmth, maternal emotional warmth, and paternal and maternal overprotection scores were all high. Her adult attachment anxiety and avoidance scores were both low, and she had a high sense of social connectedness. Pre-intervention, she scored low on the SCS; CEAS for self-compassion and compassion from others, but high with regard to compassion for others. During the intervention, participant 1 listened to the audio recording only twice for 4 minutes each time over the fourteen days. Post-intervention, her SCS self-compassion, CEAS for self and CEAS from others improved from low self-compassion to high compassion. The RCI showed an improved reliable change only for self-compassion and compassion for others.

Participant 2 was a 24-year-old single female, professional worker, educated to degree/higher degree level. The perceived parenting scores were high for all the parenting styles (rejection, overprotection, emotional warmth) for both her father and mother. Her adult attachment anxiety and avoidance levels were low, and she had high social connectedness. Her pre-intervention scores showed low self-compassion as measured by the SCS and CEAS for self. Compassion from others and for others scored highly. During the intervention, this participant listened to the audio file for 5 minutes on each of the 14 days. Post-intervention, her levels of compassion from others and for others remained high. Although her CEAS compassion for self score improved to high on the scale, her SCS self-compassion score remained low. The RCI showed that no reliable change had taken place.

Participant 3 was a 52-year-old married male who was a student and had been educated to higher education level. In regard to the perceived parenting styles in childhood, he scored his father high but his mother low in terms of rejection. He perceived both parents as low in overprotection and emotional warmth. He scored highly in terms of attachment anxiety and avoidance and low in regard to social connectedness. Participant 3 had a low self-compassion (SCS) score and likewise for all three scales of the CEAS (for self, from others, for others). For 6 days out of the 14, he listened to the audio recording for an average of 10 minutes per day. Post-intervention, his SCS self-compassion and CEAS (for self, from others, for others) scores increased to a level that was indicative of high compassion on each scale, and the RCI showed these changes to be reliable.

Participant 4 was a 22-year-old male living with his partner, educated to ONC/BTEC level and a student. He perceived both of his parents in childhood to be low in terms of rejection and overprotection and high in emotional warmth. He had high adult attachment anxiety, low

avoidance, and low social connectedness. Prior to the intervention, he scored low on the SCS and high on all three scales of the CEAS. This participant listened to the audio file for 13 minutes on each of 2 days out of the 14. His self-compassion remained low, according to the SCS, but his score on the CEAS for self decreased to low. The CEAS compassion from others and for others score remained high. In regard to his compassion for self score, the RCI showed the deterioration to be reliable.

Participant 5 was a 28-year-old married male, professional worker, with a degree or higher degree. He perceived both his parents to be low in terms of rejection and overprotection, but high in emotional warmth. His adult attachment anxiety was high, and his adult attachment avoidance was low, as was his social connectedness. He scored low in regard to self-compassion (SCS) and high on all three CEAS scales. On average, this participant listened to the audio clips for 30 minutes each day for 12 days. Post-intervention, both of his self-compassion (SCS; CEAS for self) scores were high, as was compassion for others (CEAS). However, the compassion from others score deteriorated, and according to the RCI, this was deemed a reliable change.

Participant 6 was a 23-year-old single male, professional worker, with a degree or higher degree. He perceived his parents as low in terms of rejection and overprotection but high in emotional warmth. He had high attachment anxiety and low attachment avoidance. His social connectedness was high. Prior to the intervention, he scored low in terms of self-compassion (SCS) and high on all the CEAS scales. For the 14 days of the study period, this participant listened to the audio clips for 3 minutes each day. His self-compassion (SCS) remained low post-intervention, and all three of his scores on the CEAS scales remained high. There were no reliable changes observed.

Participant 7 was a 52-year-old female, professional worker, separated or divorced, with a higher education. She perceived both paternal and maternal rejection during childhood to be low and overprotection as high. She reported experiencing a low level of paternal emotional warmth but high maternal emotional warmth. This participant was high in attachment anxiety and avoidance. Her sense of social connectedness was also high. She had high self-compassion (SCS) and high compassion for self, from others and for others. She listened to the audio recording for 12 minutes for a total of 8 times. Post-intervention, all the other measures remained high. The RCI confirmed the change in self-compassion as reliable.

Participant 8 was a 48-year-old married female with a degree or higher degree and a student. She perceived her parenting as low in relation to all the categories. Her attachment style was high in anxiety, low in avoidance, and low in social connectedness. Low compassion scores were recorded on both the self-compassion (SCS) and compassion for self (CEAS) scales, as well as for receiving compassion from others. She listened to the audio intervention for 10 minutes on each of 5 days out of the 14. No changes in the measurement scores were recorded, either from low to high, or vice versa, and no reliable changes were observed post-intervention.

Participant 9 was a 21-year-old single female, educated to A-level and a student. Her perceptions of all the parenting styles for both her father and mother were high, except for rejection, which was low for both parents. She scored low in terms of attachment anxiety, attachment avoidance and social connectedness. The participant's SCS score was high, but she scored low in regard to CEAS for self. Both compassion from others and for others were high. She listened to the audio clip for 10 minutes on average for 6 days out of the 14. Post-intervention, there was little change in her SCS self-compassion score, but an increase to high

compassion in CEAS for self was recorded. Both her levels of compassion from others and for others remained high. There were no reliable changes post-intervention.

Participant 10 was a 21 year old single female, educated to A-Level, and a student. She perceived both of her parents as low in regard to rejection and high in emotional warmth. Her father was perceived to be low in terms of overprotection, whereas her mother was perceived to be high. She was low in attachment anxiety and avoidance (secure attachment) and low in social connectedness. She had low self-compassion (SCS) and low compassion for self (CEAS), but high compassion from others and for others (CEAS). She listened to the audio clip for only 2 minutes on each of 10 days out of the 14. Post-intervention, there were no changes for any of the scales and thus no reliable changes recorded.

Participant 11 was a 52-year-old married male, educated to higher education level and a student. His perceptions of the parenting he received in childhood were low in terms of paternal and maternal rejection, emotional warmth and overprotection. His adult attachment style was high in attachment anxiety and low in attachment avoidance, and his social connectedness was low. He listened to the audio clips for 3 minutes on each of the 14 days. Subsequently, he scored low on all the compassion scales (self-compassion, for self, from others, for others).

Participant 12 was a 22-year-old single male educated to higher education level and a student. The parenting he received in childhood was perceived as low in paternal and maternal rejection and low in maternal overprotection. However, he rated paternal overprotection as high. He also scored both paternal and maternal emotional warmth as high. His adult attachment style was high in anxiety and low in avoidance. He had a high level of social connectedness. He scored low in terms of self-compassion (SCS) but high on all the CEAS compassion scales. The audio

clip was played for 20 minutes on each of 3 days out of the 14. All the compassion scales remained the same, post-intervention, and there were no reliable changes observed.

Participant 13 was a 32-year-old married female with a degree or higher degree and is a professional worker. She scored all the perceived parenting styles, as well as attachment and social connectedness as high. Her levels of self-compassion (SCS) were low, but she scored high on all three of the CEAS compassion scales. She played the audio clip for 1 minute on each of the 14 days. Apart from her self-compassion (SCS) scores increasing from low to high, there were no other changes observed, reliable or otherwise.

Participant 14 was a 31-year-old single female, professional worker, with a degree or higher degree. Her perceptions of the parenting she received in childhood involved high levels of paternal rejection and low paternal overprotection and emotional warmth. The parenting she received from her mother was scored as low in regard to all three parenting styles. Social connectedness was also low. However, the participant omitted to complete the adult attachment scale, so it is unknown whether she was high or low in attachment anxiety and avoidance. She scored low in regard to self-compassion (SCS), compassion for self and from others, but high in compassion for others (CEAS). The audio clip was listened to for 20 minutes for 4 days out of the 14, in her case. Post-intervention, her scores for self-compassion remained low, but a reliable change had taken place. Her compassion for self increased to high, but compassion from others and for others remained unchanged.

Participant 15 was a 20-year-old single male with an ONC or BTEC who is unemployed. He perceived all the parenting styles as low for both his mother and father. His adult attachment style was high for attachment anxiety and low in avoidance. He had a low sense of social

connectedness. His self-compassion was low according to the SCS and high for CEAS for self, from others and for others. He played the audio clip for 30 minutes on each of 4 days out of the 14. There were no changes in any of the measures post-intervention.

7.4 Discussion

7.4.1 Summary of the Findings

This study aimed to discover whether there would be any reliable changes in a participant's compassion levels after the compassion intervention. This section discusses the results for self-compassion (SCS), each flow of compassion (CEAS), and the association with perceived parenting, adult attachment and social connectedness. The strengths and limitations of the study and suggestions for possible future research are also discussed. Finally, the conclusions that can be drawn from this chapter are summarised.

7.4.2 Pre- and Post-Intervention

The JFR method (1991) was used to determine whether any reliable changes had taken place pre- and post-intervention in individual participants. Reliable changes were observed in the case of seven participants (participants 1, 3, 4, 5, 7, 11, 14).

7.4.3 Pre- and Post-Intervention - Self-Compassion Scale

Mindful Self-compassion is based on Buddhist psychology and focuses only on compassion for the self, unlike the three flows of compassion in the CEAS (Gilbert et al., 2017), which is based on evolutionary psychology. Although the SCS (Neff, 2023b) and the CEAS (Gilbert et al., 2017) measure different aspects of compassion, the reliable changes observed for the SCS measures are still of interest.

When the SCS was used to measure participants' scores, thirteen participants scored low in self-compassion pre-intervention. Four participants showed an improvement in their scores that constituted a reliable change, of which two moved from the low SCS score category to the high category (participants 1 & 3), while two remained in their original category, one of which was low (participant 14) and the other was high (participant 7). When comparing the scores for the categories of both self-compassion and compassion for self, more participants had low compassion scores in the SCS than in the CEAS and the changes from low to high categories were not consistent for all participants. This is not surprising, as the SCS and CEAS measures have different theoretical underpinnings, as explained previously, and the audio clip was based on evolutionary psychology.

7.4.4 Pre- and Post-Intervention - Three Flows of Compassion

7.4.4.1 Compassion for self

Unlike for the SCS scores, eight of the participants were in the low category pre-intervention. There were three reliable changes: two improved, and one deteriorated. Only one participant (participant 3) showed a reliable change for both self-compassion (SCS) and compassion for self. The types of changes made by the three participants were all different: participant 1 improved from low to high, participant 4 deteriorated from high to low, and participant 11 experienced a reliable change in compassion *for self*.

7.4.4.2 Pre- and Post-Intervention - Compassion from others

Five out of the fifteen participants scored low on compassion from others. Three participants showed reliable changes. Participants 1 and 3 improved their compassion from others scores from low to high. Participant 5 experienced a reliable deterioration (high to low). All the other

participants remained in the same category as they had been pre-intervention, which was more consistent than was the case with self-compassion and compassion for self.

This flow of compassion differs from the previous two compassion for self scales because it refers to the experience of receiving compassion from people around us and whether we feel they are supportive and compassionate towards us (Gilbert et al., 2017). Fewer participants scored low in terms of receiving compassion from others and even less so after the intervention. Even though this flow of compassion involves an outward perception of compassion being received from others, rather than experienced within oneself.

7.4.4.3 Pre- and Post-Intervention - Compassion For Others

Surprisingly, only two participants scored low on compassion for others (participants 3 & 11). However, what stands out, across the flows of compassion and self-compassion, is that the participants generally scored high on compassion for others and, therefore, it can be cautiously assumed that perhaps the majority of the participants found giving compassion much easier than receiving compassion from others and being compassionate to themselves. According to Neff (2011, p. 188.), people who lack self-compassion still have the capacity to be compassionate to others.

7.4.5 Perceived Parenting in Childhood

Although an individual's perception of their parenting is based on how they feel in the present, parenting in childhood is historically based, so it would be expected that the scores for this measure would show little difference pre- and post-intervention. Yet, for each of the parenting styles (rejection, overprotection, emotional warmth), changes were observed in some of the participants' scores from low to high and vice versa. This could be because an individual re-

evaluated how they perceived their parents, and perhaps considered past events or circumstances from a less judgemental perspective. Non-judgement is one of the six attributes of Gilbert's (2010) evolutionary concept of compassion. It is the ability to tolerate and be more reflective of another person's condition, even when it generates negative feelings in oneself. The Dalai Lama (2002, p.75) claims that the ability to tolerate one's enemy (i.e. the negative perception of one's parenting) can help to lay good foundations for building compassion. Nevertheless, despite these changes in the perceived parenting scores, it cannot be assumed that they are a result of the intervention. It could be the case that the participants responded differently (more positively or more negatively) to the questionnaires on each occasion.

7.4.6 Attachment Anxiety and Avoidance

There were few notable findings relating to attachment anxiety and avoidance among the participants, regardless of whether they experienced reliable changes. Participant 14 did not answer the questions about the adult attachment measures. Of the 14 participants who did answer them, more came within the high category for attachment anxiety, while most participants scored low for attachment avoidance.

Higher levels of both attachment anxiety and avoidance predict lower mindfulness (Pepping et al., 2013). With regard to high attachment anxiety, nine out of the ten participants who scored highly had low self-compassion, and two out of three participants scored high in relation to attachment avoidance with low self-compassion, pre-intervention. However, regarding compassion for self, only three out of ten participants who scored highly for attachment anxiety and two out of three with high scores for attachment avoidance had low levels of compassion for self, pre-intervention. Avoidance was consistent with both the compassion measures for self, but this was not the case with anxiety. Although there was more consistency regarding the

findings about the relationship between self-compassion and attachment anxiety, the intervention was based on the evolutionary theory of compassion for oneself. Those participants whose self-compassion and compassion for self increased in the form of a reliable change, did not show any more consistent findings regarding the relationship between compassion and attachment anxiety. Again, there was no consistency between the compassion scores and the scores for adult attachment anxiety.

7.4.7 Social Connectedness

With regard to the Social Connectedness Scale, all of the participants, bar participant 15, underwent no changes in their categories, post-intervention. Ten out of the fifteen scored low in terms of social connectedness. Interestingly, those participants who scored high pre-intervention and post-intervention also scored high in terms of compassion from others and for others. Scoring highly in regard to social connectedness could be due to the two flows of compassion (from others, for others) having an interactive component involving another person. Hence, it is possible that those individuals with a high level of social connectedness may feel more connected with the world around them (Lee & Robbins, 1998). Although the intervention used in this study is convenient to access, it is, in most cases, practised in isolation. Group work can help to promote connectedness by enabling group members to have shared experiences, develop connections, and contribute to self-identification (Haslam, 2015). However, this is beyond the study's scope, because it was not a social connectedness intervention and therefore, any reliable change cannot be measured. If the intervention had been conducted in a group setting, those who were low in social connectedness might have had a greater chance of increasing their self-compassion.

7.4.8 Strengths

This longitudinal case series study was designed using measures that had good psychometric properties. While causal inferences cannot be made from a case series design (Green et al., 2022), the intervention's effects allow for the development of hypotheses leading to further studies. Because they are prospective in design, this also allows for cost-effective and timely studies that can be delivered via self-directed interventions to be conducted. In addition, if the intervention is delivered online in a self-directed way, then it may be easier for the participant to complete the intervention when it is most convenient for them. This study was almost entirely self-directed, with the exception of an email prompt at the 14-day point to complete the second set of questionnaires.

Longitudinal studies can explore the individual in a way that goes beyond one moment in time. The results of this study showed that changes occurred between two time points, albeit small and inconsistent changes. Although there were no clear improvements in compassion across all the variables and results, the findings did show that those who experienced reliable changes were potentially responding to other factors in their life. Thus, it would be worth investigating these other factors and how they influence compassion.

7.4.9 Limitations

When evaluating the intervention, it is important to keep in mind that this is an exploratory study designed to establish whether there were any outcome patterns and trends among the participants' scores.

If the participants had completed the intervention as instructed, it is likely that the intervention would have a greater chance of success. Initially, forty-seven people completed the first

questionnaires, but only fifteen completed the intervention itself, which involved completing the second set of questionnaires. The dropout rate for this study was 68%. By initially including two measures for compassion (SCS; Neff, 2003b; CEAS; Gilbert et al., 2017), it was hoped that they would show similarities and differences between the two constructs of compassion.

Using a self-directed unguided online intervention appeared to be a strength of the study because online interventions can overcome barriers and increase accessibility compared to having to engage in face-to-face programs (Murray, 2021). However, the expectations of an online intervention were not fulfilled, perhaps because a remotely administered intervention may have lessened the intervention's potency and, therefore, a face-to-face intervention may have been more successful in ensuring adherence to the study requirements.

One of the significant limitations of this study was participants not following the instructions and carrying out the activity for the recommended time over the 14 day-period. Because the audio intervention was not engaged with for the correct amount of time, it is difficult to know whether it would have revealed some more significant results or to rate its overall effectiveness. However, it is unlikely that any changes, whether reliable or not, can be attributed to participating in the practice of compassion.

The Reliability Change Index developed by Jacobson et al. (1984) is a useful and relatively easy way to compute statistics at an individual level and for small samples. (Zahra & Hedge, 2010). However, it is difficult to find other studies that have used the same measure, especially the relatively new CEAS (Gilbert et al., 2017), and in a population with similar characteristics using the mid-way cut-off point (Zahra & Hedge, 2010).

Although not the main focus of the study, the changes in the measures for perceived parenting, adult attachment and social connectedness were explored. Using a cut-off point to divide each of the median scores into high and low categories helped to indicate whether an individual was low or high on a scale, pre-intervention, and to identify any changes that may have occurred, post-intervention. Even though the magnitude of the change was not known, nor whether they were reliable changes, the potential for producing interesting results existed; however, it did not add any further clarity to the study's results.

The Fears of Compassion Scale was not used in this study due to the inclusion of other measures that were thought likely to offer more interesting results. Nonetheless, examining fears of compassion may have revealed additional findings about increasing compassion or the lack thereof, for the intervention study. However, it was hoped that the two compassion measures would show similarities and differences in terms of the results produced, but in fact they did not reveal anything significant. Including too many measures and, therefore, a large number of questions, could have contributed to some participants not completing the study due to disenchantment with the content of the intervention (Eysenbach, 2005). Even so, not one of the remaining fifteen participants fully completed the task for the correct number of minutes and days over the fourteen-day period.

7.4.10 Future Research

Several adjustments could be made for future research, such as increasing the sample size through less attrition and investigating a more diverse population. Unfortunately, people from different ethnicities were not represented in the study. More studies are therefore needed to ensure greater diversity, with participants that are representative of the population as a whole; if not, it could make it difficult to generalise the findings to a broader population (Shea et al.,

2022). If there had been fewer measures or fewer questions overall, this might have encouraged more participants to remain in the study. Using the SCS and CEAS, which measure different aspects of compassion, did not reveal any substantial difference in the results produced by each instrument. However, as a more recent measure of compassion, the CEAS (Gilbert et al., 2017) has a lot of scope for increasing understanding of the different flows of compassion and the factors that influence them. Instead of using the total scores for the SCS (Neff, 2003b) and CEAS (Gilbert et al., 2017), exploring the scores for the subscales of each of the compassion scales may produce different and more interesting results that could add to the findings of, and knowledge gained from, this study. However, an important consideration to keep in mind is that using fewer measures would produce less complex and clearer results in potential future studies.

In a meta-analysis of self-compassion interventions examining group and individual modes of intervention delivery, Ferrari et al. (2019) found that group-based delivery had a stronger effect. This feeds into the idea that social connectedness - how connected an individual feels to the world around them - also plays an important role in developing compassion. A group setting may increase the likelihood of participants completing the intervention and complement the positive change in compassion that was found post-intervention. Although the study's focus was on the outcome measure of compassion, it is also important to consider interventions that may have an impact on an individual's ability to develop compassion. Social connectedness or adult attachment interventions may be helpful in acquiring a greater understanding of how these factors influence compassion (MacBeth & Gumley, 2012).

An alternative approach could involve conducting repeat interviews using a longitudinal qualitative evaluation approach. This may help to identify why an intervention is effective or

not and for whom, in a more contextually detailed way, such as in terms of the experiences and process of change. This could be one of many methods with the potential to help to understand the complexities involved in developing a greater capacity for compassion. If time and access to interventions are limited, it is recommended that future research should continue to determine how remote interventions can be implemented with more successful results.

7.4.11 Conclusion

Five participants experienced an improved and reliable change in one or more of the compassion scales, which, overall, did not represent much change after the intervention. It is possible that those who experienced reliable changes may be responding to other factors in their life. It is unlikely to be due to the intervention because none of the participants met the requirements in terms of the time or days specified to complete the intervention effectively. Those who attempted the intervention audio exercise had the motivation to engage with compassion but perhaps not the motivation to take action. However, it is worth considering whether an intervention for improving adult attachment and social connectedness may help individuals to cultivate compassion.

CHAPTER EIGHT

DISCUSSION CHAPTER

8.1 The Aims of the Research

The current research comprises a collection of quantitative studies designed to investigate the mediating roles of adult attachment and social connectedness in the relationship between perceived parenting behaviour and compassion. The various studies have explored different types of compassion, such as self-compassion, the three orientations of fears of compassion and compassion for self, for others and from others. The rationale behind investigating these different types of compassion was to explore beyond Neff's well-established self-compassion model (2003a), which is commonly used in many studies. It was hoped that incorporating other dimensions of compassion may reveal patterns that could further the understanding of the relationship between perceived parenting in childhood and compassion. Furthermore, including adult attachment and social connectedness in the investigation was intended to inform a greater understanding of this relationship between perceived parenting and compassion and offer insights into the roles they play within each dimension.

8.2 Chapter Overview

This chapter aims to discuss the findings from the previous chapters that explore the relationship between perceived parenting in childhood and compassion when mediated by adult attachment and social connectedness. It begins with a summary of the main findings produced by the research throughout the preceding chapters in relation to the study's aims and research questions. These aims were achieved, and the discussion of the findings in relation to the research questions is followed by an interpretation of these findings and how they relate to the current literature. The mediatory roles of adult attachment and social connectedness in relation to each of the compassion constructs are discussed. The implications of these findings are also

considered. Next, the strengths and limitations of these findings are addressed, and finally, recommendations for further research are made and conclusions offered.

8.3 Summary of the Main Findings

As explained earlier, the three main aims of the thesis were to explore the relationship between perceived parenting behaviour and compassion when mediated with adult attachment and social connectedness. The research objectives involved determining if a relationship existed between perceived parenting behaviour and compassion when mediated with adult attachment and social connectedness. Further investigation into the role of adult attachment and social connectedness was proposed, together with a series of research questions.

8.3.1. Findings Related to the Measures

The CFA that was conducted to investigate the psychometric properties of the s-EMBU (Arrindell et al., 1999) and the CEAS (Gilbert et al., 2017) in Chapter Three showed that both measures appear to have good reliability and validity in a UK community sample. It was important to use highly validated measures for measuring perceived parenting and compassion before applying them to the research questions addressed in this thesis.

8.3.2 Research Question One: Is compassion related to perceived paternal and maternal parenting?

When the SCS (Neff, 2003b) was used to measure self-compassion, the results showed that self-compassion was significantly related to paternal and maternal rejection and maternal emotional warmth. With regard to the CEAS measure, all the parenting styles were significantly related to compassion for self in relation to paternal and maternal parenting this was not the case for compassion for others and from others. Fear of compassion for self and from others, was significantly related to all the parenting styles, with the exception of paternal

overprotection. However, fear of compassion for others did not significantly correlate with emotional warmth in the case of either parent.

8.3.3 Research Question Two: Is Adult Attachment Related to Perceived Paternal and Maternal Parenting Behaviour?

The findings for the two datasets showed differences in terms of the correlations, highlighting the inconsistency between the participants in the two studies. Dataset 1 (Chapters Four and Six) showed statistically significant relationships between paternal rejection, maternal rejection and paternal emotional warmth with attachment anxiety. Only maternal rejection was found to have a statistically significant relationship with attachment avoidance.

Dataset 2 (Chapter Five) showed a statistically significant relationship between all the parenting variables and attachment anxiety. The results for avoidance also revealed differences between the two datasets. paternal and maternal rejection and emotional warmth showed a statistically significant relationship with attachment avoidance. Only maternal rejection was consistent across attachment anxiety and avoidance for both datasets.

8.3.4 Research Question Three: Does Adult Attachment Mediate the Relationship Between Compassion and Perceived Parenting Behaviour?

The relationship between maternal rejection and self-compassion was fully mediated by attachment anxiety, which accounted for 28% of the variance in self-compassion.

The negative relationship between paternal and maternal rejection and compassion for self was partially mediated by attachment anxiety; both explained 20% of the variance in compassion for self, similarly to the findings for self-compassion.

In the case of paternal emotional warmth, this was a full mediation with a variance of 13%, whereas the mediation effect for maternal emotional warmth was partial, and the variance was 18%. The negative relationship between both paternal and maternal overprotection and compassion for self was fully mediated, with a variance of 14% and 13%, respectively. Interestingly, adult attachment had no mediatory effect on the relationship between perceived parenting and compassion for others or compassion from others.

When attachment anxiety and attachment avoidance was used as a mediator, partial mediation occurred. It produced a 28% and 23% variance in FoC for self. Paternal emotional warmth was found to have a significant positive effect on FoC for self and was fully mediated by attachment anxiety, showing a 21% variance.

When maternal rejection and FoC for others mediated by attachment anxiety, partial mediation took place, with a variance in FoC for others of 13%. The relationship between maternal rejection and FoC from others was partially mediated by either attachment anxiety or attachment avoidance, with a variance of 38% and 36% (respectively). The relationship between paternal emotional warmth and FoC from others was also partially mediated, but only by attachment anxiety; the variance was 32%.

8.3.5 Research Question Four: Is Social Connectedness Related to Perceived Paternal and Maternal Behaviour?

In this research question, both datasets showed consistency in terms of their significant correlations between parenting behaviour and social connectedness. There was a correlation between social connectedness and rejection and emotional warmth in regard to both the

paternal and maternal parenting styles, and between social connectedness and maternal overprotection.

8.3.6 Research Question Five: Does Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting behaviour?

Paternal rejection and maternal rejection were found to have a significant indirect effect on self-compassion when mediated by social connectedness. Social connectedness had a full mediation effect on the relationship between maternal rejection and self-compassion, with a variance of 31% for self-compassion. Interestingly, in the case of paternal rejection and self-compassion, even though significant mediation occurred, with a variance of 29%, the model revealed there was no significant total and direct effect. Maternal emotional warmth was positively and significantly associated with self-compassion. However, social connectedness had a full mediation effect on the relationship between maternal emotional warmth and self-compassion, with a 30% variance.

Social connectedness partially mediated the relationship between paternal and maternal rejection and compassion for self, with a 29% and 28% variance, respectively. Social connectedness demonstrated a full mediation effect on the relationship between paternal emotional warmth and compassion for self, with a variance of 22%. However, only partial mediation occurred in the case of maternal emotional warmth, with a variance of 25%. Maternal overprotection and compassion for self were fully mediated by social connectedness, accounting for 23% of the variance.

Social connectedness partially mediated the relationship between paternal rejection and compassion for others, with a variance of 18%. With regard to maternal rejection, even though

it was significantly mediated by social connectedness, with a variance of 12%, the model revealed a non-significant total and direct effect. Social connectedness fully mediated the relationship between maternal emotional warmth and compassion for others, with a variance of 12%.

Social connectedness mediated the relationship between paternal and maternal rejection and compassion from others, with a variance of 12% in both cases. However, neither had a significant total and direct effect. Social connectedness fully mediated the relationship between paternal and maternal emotional warmth and compassion from others, with a variance of 12% and 13%, respectively.

Social connectedness fully mediated the relationship between paternal rejection and FoC for self and partially mediated for maternal rejection. The variances were 46% and 51%, respectively. Social connectedness fully mediated the relationship between paternal and maternal emotional warmth and FoC for self, with variances of 45% and 47%, respectively. The relationship between maternal overprotection and FoC for self was partially mediated by social connectedness, with a variance of 49%. In the case of the relationships between maternal rejection and FoC for self, social connectedness had a partial mediation effect, which infers that high maternal rejection may affect an individual's level of FoC for self, both directly and via social connectedness.

The relationships between paternal and maternal rejection and FoC for others were partially mediated by social connectedness, with a variance of 20% and 17%, respectively. Similarly, social connectedness partially mediated the relationship between maternal overprotection and FoC for others, with a variance of 18%.

Social connectedness partially mediated the relationship between paternal and maternal rejection and FoC from others, with a 51% and 56% variance, respectively. In contrast, the relationship between paternal and maternal emotional warmth and FoC from others was fully mediated by social connectedness, with a 48% and 52% variance, respectively.

8.3.7 Research Question 6: Does Adult Attachment and Social Connectedness Mediate the Relationship Between Compassion and Perceived Parenting Behaviour?

Maternal rejection was the only perceived parenting style, in relation to self-compassion, that was mediated by attachment anxiety and social connectedness separately. When the serial mediations between maternal rejection and self-compassion were run using both attachment anxiety and social connectedness as mediators, the results indicated that full mediation took place, with a variance of 38%.

When paternal rejection and compassion for self were mediated by attachment anxiety and social connectedness, partial mediation occurred, with a 32% variance in compassion for self. The relationship between paternal emotional warmth and compassion for self was fully mediated by attachment and anxiety and social connectedness, with a 26% variance. When mediated by attachment avoidance and social connectedness, the relationship between maternal rejection and compassion for self was partially mediated, with a variance of 30%. Finally, the relationship between maternal emotional warmth and compassion for self was partially mediated by attachment anxiety and social connectedness, with a variance of 28%

When a serial mediation was run, the relationship between maternal rejection and fear of compassion for self was partially mediated by attachment anxiety and social connectedness,

with a 52% variance; and by attachment avoidance and social connectedness, also with a variance of 52%. When mediated by attachment anxiety and social connectedness, the relationship between paternal emotional warmth and fear of compassion for self was fully mediated, with the variance in paternal emotional warmth being 47%.

Maternal rejection was the only perceived parenting style whose relationship with fears of compassion from others was mediated by both attachment anxiety and social connectedness; and attachment avoidance and social connectedness. When the serial mediation was run, the relationship between maternal rejection and fears of compassion from others was partially mediated by attachment anxiety and social connectedness, with a variance of 59%. Similarly, the aforementioned relationship was partially mediated by attachment avoidance and social connectedness, with a variance of 62%.

8.3.8 Findings Related to the Intervention Study

The results of the intervention study – which aimed to improve participants’ capacity for compassion - did not inform meaningful patterns of change that had been hoped for. Although there was some improvement in a few participants’ scores, this was unlikely to be due to the audio exercise. None of the participants completed the study for the intended duration and, therefore, these changes in their scores were probably due to other external contributory factors.

8.4 Parenting and Compassion

The first research question investigated in this study sought to determine whether there was a relationship between perceived parenting behaviour and compassion in adulthood. The study found that only some perceived parenting behaviours had a significant relationship with compassion.

A finding to emerge from the analysis is that emotional warmth had a significant relationship with compassion and fears of compassion. These results are consistent with those of previous studies, which have shown that parental emotional warmth correlated positively with self-compassion and negatively with fear of compassion for self (Kelly et al., 2016; Naismith et al., 2019). These findings are also consistent with theories that suggest early emotional warmth is essential for the development of the ‘soothing system’, that underlies self-compassion (Gilbert, 2010; Gillath et al., 2005). According to attachment theory, parents who provide a child with a sense of safety develop qualities such as emotional resilience in the child (Mikulincer & Shaver, 2005). Conversely, if a child does not receive comfort and the freedom to explore, they are likely to internalise the self as unworthy or incompetent (Bowlby, 1969). These internalised feelings may mean they are less likely to relate to themselves with self-kindness, thus adversely affecting their capacity for greater self-compassion (Neff, 2011a).

In this research, the relationship between perceived emotional warmth and self-compassion was found to be negligible in the case of fathers (r s between .162 - .178) but of modest strength for mothers (r s between .196 - .259). A possible explanation for this is that fathers’ warmth may only have a limited positive effect on the development of a child’s internalising behaviour, and therefore on the ‘soothing system’. Although emotional warmth is central to the fathering role (Lee et al, 2018), Goeke-Morey and Cummings (2007) suggest that a father’s parenting roles are more tenuous than those of a mother.

This is consistent with theories such as attachment theory, which suggests that mothers are usually considered the primary caregiver and therefore the mother’s parenting style lays a stronger foundation for the development of an individual’s internal self-to-self relating (Bowlby, 1982). However, there is evidence from current literature in the attachment field to

suggest that fathers also play a significant role in the type of attachment styles that a child develops (Bowlby, 1988; Ducharme et al., 2002; Field, 1978; Grossman et al., 2002).

Alternatively, it may be the case that perceptions of parental behaviour during an individual's childhood can change over time and, therefore, their impact and influence lessens in adulthood. Gilbert (2010), states that although an individual can change over time, perceptions of parenting behaviour still have a strong influence on an individual's working model. Although this research cannot determine whether change does take place over time.

Individuals who recall their parents as being rejecting and overprotecting are more vulnerable to self-hating (Satici & Atkin, 2015). In this research, both paternal and maternal overprotection had a negative significant relationship with compassion for self (CEAS; Gilbert 2017). These results reflect those of earlier observations, which showed that parental overprotection had a negative and significant relationship with self-compassion (Kelly & Dupasquier, 2016; Pepping et al., 2015). However, when measured on the SCS, these relationships were not significant. The results could suggest that the SCS and CEAS for self, capture different aspects of compassion. The meaning or importance of the items within a measure may be interpreted differently by each participant.

Furthermore, fear of compassion for self and from others, had a positive relationship with overprotection, yet only maternal overprotection had a positive significant relationship. This is in contrast to earlier findings by Wang et al (2023), who reported a positive and significant relationship between overprotection and FOC for self and from others in the case of both parents.

The inconsistencies found in the results of this study with regard to overprotection may be due to the different aspects of compassion being measured, differences in the SCS, CEAS and FoC measures, or parental overprotection being perceived as interfering and too involved, depending on the mother and father's parenting role. Current literature investigating parenting behaviour and psychological adjustment in young adults, has reported different findings. Compared to fathers, mothers tended to be more emotionally warm but also more overprotective (Gerlsma & Emmelkamp, 1994; Koutra et al., 2022; Petrowski et al., 2009) and some report no differences in the associations between fathers and mothers and perceived overprotection (Arslan et al., 2023). These inconsistent findings may go some way towards explaining why this research produced varying results regarding the relationship between parental overprotection and different constructs of compassion.

Where FoC for others was found to be related to rejection and overprotection, the relationship between them was positive (but negative in the case of compassion for others). The relevant theories that link with these findings indicate that self-criticism may block interpersonal communication. As a result, self-criticism may reduce an individual's ability to be open to, and understand, others' feelings because they feel ashamed and unsafe (Gilbert et al., 2012). Self-compassion and compassion for others were found to be only weakly related or unrelated to self-compassion (Gilbert, 2016; Neff & Pommier, 2012). This suggests that individuals may find it easier to develop the capacity to be compassionate to others than to themselves.

A person who perceives their parent(s) as rejecting them may fear receiving compassion from others, which, in turn, reduces their ability to feel safe. However, emotional warmth is positively related to compassion from others. Unlike rejection, the results for emotional warmth indicated that those with parents who were perceived as emotionally warm during their childhood were more likely to receive compassion from others. These individuals regarded

their upbringing as safe and calming and had more positive feelings for themselves and others (Bowlby, 1973; Mikulincer & Shaver, 2007).

The most interesting finding was that paternal and maternal rejection were consistently and significantly related to all the dimensions of compassion included in this research (compassion for self, for others, from others, fears of compassion). All of the correlations between rejection and compassion were in the expected directions. In other words, self-compassion, compassion for self, for others and from others were negatively and significantly related to paternal and maternal rejection. In the case of FoC, all of the flows of FoC were positively and significantly related to paternal and maternal rejection. Rohner et al. (2005) suggest that the current literature supports the idea that if an individual is rejected by a significant person in their life, it has a particularly powerful effect and the findings of this research appear to support this view. The relationship between paternal and maternal rejection and compassion is discussed further, later in this chapter.

This research highlights that different parenting styles have different associations with different constructs of compassion. Paternal and maternal rejection was the only parenting style that was significantly related to all the constructs of compassion. Prior research regarding the effect of paternal and maternal parenting behaviours on some of the dimensions of compassion, using the FoC and CEAS measures, is limited.

As shown in previous chapters, maternal rejection was the dependent variable that consistently emerged as the model for which mediatory factors seem to mediate the relationship. This does not mean that the findings for other dependent variables are not interesting or relevant where there are significant relationships between the dependent variables and independent variables.

However, there does seem to be consistency in the findings, regardless of the dependent variables, because different dependent variable scales were used to measure them. Additionally, in the case of models that showed bivariate associations but not a significant mediation effect, the relationship may still exist; however, it might have only been a weak relationship in the first place. It is therefore worth considering what it is about maternal rejection that is consistent across all the compassion scales, and what role adult attachment and social connectedness play in this relationship. The following sections focus on the mediatory roles of adult attachment and social connectedness in the relationship between maternal rejection and compassion.

8.4.1 The Mediating Role of Adult Attachment.

The first aim of this research was to explore the mediating role of adult attachment in the relationship between perceived parenting and compassion. This aim was addressed by research questions two and three, set out in previous chapters. Research question two was designed to determine the relationship between perceived parenting and adult attachment, while research question three was intended to establish the mediating role that adult attachment plays in the relationship. The two-dimensional adult attachment model proposed by Brennan et al. (1998), measures attachment anxiety and avoidance on a continuum.

This research found that the relationship between adult attachment and perceived emotional warmth was negative, and the relationship between adult attachment and perceived rejection was positive. These results were supported by previous findings produced by Pepping et al. (2015), who found that adult attachment had a negative relationship with emotional warmth and a positive relationship with parental rejection and overprotection. These research findings are, therefore, in the same direction as those of Pepping et al. (2015) and Neff and McGehee (2010). However, Pepping et al.'s (2015) study only reported results for parenting overall rather

than differentiating between paternal and maternal parenting; while Neff and McGehee (2010) only explored the role of mothers and maternal support. Naismith et al.'s (2018) study partially supported the findings of this research, in that attachment avoidance was negatively related to Early Memories of Warmth and Safeness (EMWSS) but had a positive relationship with attachment anxiety, yet neither of these relationships were significant. Naismith et al.'s (2018) study was conducted using a clinical sample whereas this research used a non-clinical sample, which may explain the differences between the findings.

As previously mentioned in the Introduction, those with secure attachment exhibit low levels of anxiety or avoidance, and those with insecure attachment styles exhibit anxiety and avoidance patterns (Brennan, Clark & Shaver, 1998). Those who experience secure attachment in their early years are likely to apply the same attachment style to their adult romantic relationships (Hazan & Shaver, 1987). The results of this study demonstrate the significant associations between some of the perceived paternal and maternal behaviours and adult attachment, and therefore, support attachment theory.

It is difficult to compare the findings of this research with those of Pepping et al. (2015), due to the fact that they reported their results for parents as one group, rather than differentiating between fathers and mothers. Nonetheless, across both datasets, maternal rejection and paternal emotional warmth had the strongest relationship with attachment.

It is thought that an individual's attachment style in adulthood reflects their early experiences with primary caregivers, and specifically the interactions based around threat and distress (Bowlby, 1969; 1988). However, this research did not find a relationship between paternal and maternal overprotection and attachment avoidance. Fraley and Shaver (1997) found that some

avoidant individuals (dismissive-avoidant individuals, high avoidance and low anxiety) are able to suppress thoughts and feelings, thereby minimising the impact of attachment-related thoughts, whereas other avoidant individuals (fearful avoidance, high avoidance and high anxiety) are not able to suppress their thoughts and feelings to the same degree. Differences in these two types of avoidance, and the fact that this research explored avoidance as one concept, may explain why attachment avoidance appears not to have a relationship with many of the perceived parenting behaviours, especially in the case of overprotection and adult attachment.

A possible explanation for the inconsistency between attachment avoidance and overprotection is that some developmental aspects of parental overprotection may be interpreted by the child as an expression of love and care, while others may perceive it as too restrictive (De Roo et al., 2022). Later on in an individual's life, if they experience a secure attachment with a romantic partner that is caring and soothing, their attachment style may be reshaped (Neff & McGehee, 2010).

Another possible explanation could be that parental overprotection does not account for much of the variance in attachment avoidance and, therefore, other factors such as age, lifestyle and socioeconomic factors may influence this relationship. These findings may be somewhat limited for overprotection, yet the results of this research regarding the relationships between maternal rejection and paternal emotional warmth and compassion, with adult attachment as a potential mediator, show promise, particularly in the case of attachment anxiety. Alternatively, it could just be that the subjective representation of the participants' answers was reflective of their mood at the time when they participated in the study. Nonetheless, across both datasets, maternal rejection and paternal emotional warmth had the strongest relationship with adult attachment.

8.4.2 Adult Attachment and Self-Compassion

The first aim of this research was to explore the possible mediating role of adult attachment in the relationship between perceived parenting and compassion. Previous literature has established the existence of associations between parenting behaviour and adult attachment; and parenting behaviour and self-compassion or fears of compassion. This research found that attachment anxiety and avoidance negatively and significantly correlated with self-compassion. Attachment anxiety had a moderate correlation with self-compassion, while attachment avoidance had a modest correlation with self-compassion. These correlations are supported by Murray et al. (2020) and Øverup et al (2017), who found the same strength and direction of correlations. Twelve of the fourteen papers examined in the literature review that observed correlations between adult attachment and self-compassion found a negative significant correlation, albeit with a different range of effect sizes.

When exploring the association between adult attachment and self-compassion using the SCS (Neff, 2003b), this research found that attachment anxiety and avoidance negatively and significantly correlated with self-compassion. Attachment anxiety had a moderate correlation ($r_s = -.49$) and attachment avoidance had a modest correlation ($r_s = -.21$) with self-compassion.

Of the studies considered in the literature review in Chapter Two, thirteen reported correlations between adult attachment measured with ECR, albeit that they used different versions of the ECR. Eleven of the thirteen papers that analysed correlations between adult attachment and self-compassion reported a stronger relationship between self-compassion and attachment anxiety than between self-compassion and attachment avoidance. However, the other two studies reported the correlations between attachment avoidance and self-compassion as being higher than for attachment anxiety and self-compassion, but the differences in attachment

anxiety and avoidance were negligible. Using the effect sizes suggested by Cohen et al. (2007), the papers reported correlations ranging from weak to strong correlational effects. Study 1 (Chapter Four) in this research found a moderate effect size for the relationship between attachment anxiety and self-compassion, which is consistent with the majority of the papers in the literature review. The results regarding the relationship between attachment anxiety and avoidance and fears of compassion for self were both found to be significant in this research. The only paper in the literature review that examined correlations for the same relationship (Naismith et al., 2018), reported that attachment avoidance had a significant correlation, whereas attachment anxiety did not. The authors state that this was due to poor internal consistency. By contrast, this research found a significant correlation for both attachment anxiety and avoidance; however, none of the studies in the literature review used the ‘compassion for self’ scale (CEAS) to measure self-compassion. Although there is a significant relationship between self-compassion and attachment anxiety; and self-compassion and attachment avoidance, the relationship with attachment anxiety was shown to be stronger. Nonetheless, both attachment anxiety and attachment avoidance show potential for mediating the relationship between perceived parenting behaviour and compassion.

8.4.3 The Mediating Role of Adult Attachment in the Relationship Between Parenting and Self-compassion.

To address research question three, the first mediation model sought to determine whether adult attachment mediated the relationship between perceived parenting in childhood and self-compassion. The findings indicated that attachment anxiety was a significant mediator in the association between maternal rejection and self-compassion; and that between paternal emotional warmth and low self-compassion. Attachment avoidance did not appear to mediate any of these relationships.

From the literature search described in Chapter Two, four papers (Pepping et al., 2015; Neff & McGehee, 2010; Moreira et al., 2016; Naismith et al., 2018) measured at least three of the variables in the mediation model. However, only Pepping et al. (2015) included all three of the measures used in this research. In their experimental study, exploring the potential origins of self-compassion, Pepping et al. (2015) found that perceived poor parenting in childhood (low emotional warmth, high rejection and high overprotection) was associated with lower self-compassion when mediated by adult attachment. They also discovered that this relationship was mediated by attachment anxiety but not by attachment avoidance.

The research conducted in this thesis was similar to that of Pepping et al. (2015), whereby attachment anxiety, but not attachment avoidance, was found to mediate the effects of perceived parenting in childhood and self-compassion. Although Pepping et al. did find a small negative correlation between attachment avoidance and self-compassion, other studies have found no association between attachment avoidance and self-compassion (Neff & McGehee, 2010; Wei et al., 2011). The correlations in this research were modest, which also aligned with Pepping et al.'s (2015) findings. Attachment avoidance did not appear to mediate any of these relationships, which is comparable with previous literature (Neff & McGehee, 2010; Pepping et al., 2015; Wei et al., 2011). These results are partially consistent with those of Pepping et al.'s (2015) experimental study (study 1). Their overall model for parental rejection mediated by attachment anxiety predicted 15.8% of the variance in self-compassion ($R^2 = .158$). The mediation model in the current research found a higher variance in the models, with maternal rejection mediated by attachment anxiety predicting 28.4% of the variance in self-compassion ($R^2 = .284$). These findings support the suggestion that perceived poor parenting in childhood

(low paternal emotional warmth and high maternal rejection) was associated with lower self-compassion when mediated by adult attachment (anxiety).

One finding that stands out from the results reported earlier is that attachment anxiety only mediated the relationship between compassion and maternal rejection. As the findings regarding maternal rejection have not been analysed in the literature, to the best of the author's knowledge, limited comparisons can be drawn with the current research. However, there are some possible explanations. These results may be influenced by the gender of a parent and the child (participant). In a study by Klein et al. (2020), female participants reported experiencing more rejection from their mothers while male participants claimed to have been more rejected by their fathers. Two tentative explanations can be put forward in regard to the findings of this research: firstly, the majority of the participants in this study were female (65%), which may explain the same-sex child-parent correlation, as per maternal rejection. However, this research did not examine the associations between parent-child differences in gender. Secondly, an individual's memories and expectations might be biased by gendered stereotypes of parenting, with mothers being depicted as playing the caring role in a child's upbringing, and fathers as stricter and less emotionally warm (Klein et al., 2020). When fathers show emotional warmth, this may be regarded as unexpected behaviour, and this perception could be reflected in how the participants answered the questions in the measure, especially if they associate a father with a gender-specific parenting role.

It is suggested that adult romantic relationships function similarly to the infant-caregiver relationship. If a mother is perceived as having a rejecting style of parenting behaviour, which consequently makes an individual feel unlovable and unworthy, evidence suggests that those individuals will end up in relationships with partners that confirm their beliefs about attachment

relationships (Frazier et al., 1996). These findings could support the idea that rejection from a primary caregiver - in this case, the mother - can lead to an individual becoming self-critical (Gilbert, 2005). These feelings may be internalised, which in turn affects an individual's level of self-compassion during difficult times. In this case, it was found that insecure attachment, i.e., attachment anxiety, mediates the relationship between maternal rejection and self-compassion.

This research is consistent with social mentality theory (Gilbert et al., 2009) which posits that, when a relationship is working well, social mentalities cause positive feelings to develop and be maintained, but give rise to negative feelings when the relationship is not going well (Gilbert, 2010). The findings suggest that an individual's positive perception of paternal warmth during their childhood enables them to feel secure in a relationship without feeling abandoned and unloved, as is the case for those low in attachment anxiety. Over time, having this security in their relationship might improve how they feel about themselves and, therefore, lead them to develop higher self-compassion. Conversely, maternal rejection was associated with high attachment anxiety, so it may be the case that if a mother is highly critical, this could result in the internalisation of a self-critical voice and a negative view of the self and, therefore, lower self-compassion. This may occur because the individual does not know how to treat themselves kindly and, therefore, how to develop further self-compassion.

As discussed previously, individual differences in compassion may be rooted in childhood and can be updated throughout an individual's lifetime (Gilbert, 2005). It is suggested that, if an individual experiences a secure attachment with a romantic partner that is caring and soothing, these internal working models relating to their attachment style can be reshaped (Neff & McGehee, 2010). Therefore, attachment anxiety plays a central role in the development of self-

compassion and has a direct impact on the level of self-compassion. Therefore, this study may go some way towards explaining why, when an individual has high maternal rejection, they also have high attachment anxiety, which affects their level of self-compassion. However, the paucity of literature on this subject may limit the extent to which the findings regarding maternal rejection and its relationship to self-compassion, when mediated by attachment anxiety, can be interpreted.

This research highlights that there are distinct differences in the relationship between an individual's perception of their father's and mother's parenting and self-compassion, when mediated by attachment anxiety. It also goes some way towards explaining the greater variance in self-compassion accounted for in this research, compared to the results of Pepping et al.'s (2015) study. Yet, it fails to explain why an even greater percentage of variance in self-compassion was not accounted for. Hence, not all of the individual differences in the relationship between self-compassion and maternal rejection, when mediated by attachment anxiety (71.6%), can be explained. As Pepping et al. (2015) point out, these relationships are complex, and it is unknown what other aspects mediate the relationship in the proportion that is unaccounted for.

8.4.4 The Mediating Role of Adult Attachment in the Relationship Between Perceived Parenting and The Three Orientations of Compassion

Research question three sought to determine if adult attachment mediated the relationship between perceived parenting in childhood and the three orientations of compassion. The CEAS (Gilbert et al., 2017) was used in the hope of extending the understanding of the relationship between perceived parenting in childhood and compassion.

Although many of the perceived parenting behaviours were correlated with attachment avoidance, it did not mediate any of the relationships between paternal and maternal rejection, overprotection, emotional warmth and self-compassion, according to the CEAS self-compassion measure. Attachment anxiety did mediate the relationship between perceived parenting and self-compassion, but not compassion from others or for others. These results reflect those of Pepping et al. (2015), who also found that parental emotional warmth, rejection and overprotection were mediated by attachment anxiety and that there was no mediation effect for attachment avoidance.

Although this research and Pepping et al.'s (2015) study used different measures of self-compassion, it was interesting that the results were consistent in terms of the relationships between self-compassion and perceived parenting, even though different measures were utilised. Thus, it is possible that the findings broadly support the theory that the relationship between parenting and self-compassion is mediated by attachment anxiety. However, with regard to the orientations of compassion for others and from others, there was no significant relationship with perceived parenting when mediated by adult attachment. It seems possible that these results may reflect an individual's capacity for self-compassion, which is predicted by perceived parenting and attachment anxiety, whereas compassion from others and for others is not. It could be argued that the positive results may be explained by the orientations of compassion, in that self-compassion could be viewed as an intrapersonal relationship with the self, whereas compassion for others and from others can be seen as interpersonal relationships with others.

Intrapersonal relationships are a reflection of how an individual copes with their internal working model. For example, if an individual's perception of parental warmth during their

childhood enables them to feel secure in a relationship without feeling abandoned and unloved, over time, this security in their relationship may improve how they feel about themselves and, therefore, the potential for developing a higher capacity for self-compassion. Alternatively, if a mother is highly critical, this may result in the internalisation of a self-critical voice and a negative view of the self, thus leading to an individual developing a lower capacity for self-compassion.

Another source of uncertainty is that the relationship between paternal and maternal rejection and CEAS self-compassion was partially mediated by attachment anxiety. This demonstrated that a significant direct relationship between paternal and maternal rejection and self-compassion remained. However, in the case of both the father and mother, rejection accounted for 20% of the variance in CEAS self-compassion. This variance was higher than the proportion accounted for with other perceived parenting behaviours. The partial mediation effect implies that, not only is there a relationship between attachment anxiety and CEAS self-compassion but also that there is some form of direct relationship between paternal and maternal rejection and CEAS self-compassion. This might be explained by the social mentality theory. Moreover, if a mother is highly critical, this may result in the internalisation of a self-critical voice and the individual adopting a negative view of themselves, which, in turn can lead to the development of a lower capacity for self-compassion.

Several studies have found no correlation between self-compassion and avoidance (Neff & McGehee, 2010, Wei et al., 2011); however, in the present research, there was a significant correlation between self-compassion and attachment avoidance, which replicates the findings of Pepping et al. (2015) and Raue-Bogdan et al. (2011), who also found a similar association. There was an association between rejection and emotional warmth and compassion, with

attachment avoidance, as well as an association between attachment avoidance and compassion for others and from others. However, attachment avoidance did not mediate these relationships when the mediation model was run. According to Pepping et al. (2015), the inconsistencies in the findings for attachment avoidance could be a result of the complexity of its relationship with feelings towards the self.

8.4.5 The Mediating Role of Adult Attachment in the Relationship Between Perceived Parenting and Fears of Compassion

To date, no other study has investigated the relationship between perceived parenting and fears of compassion when mediated by attachment. Mediation was conducted for all three ‘flows of compassion’ (for self, for others, from others). Therefore, this research was the first to explore the mediatory role of adult attachment in this relationship.

Gilbert et al. (2005) suggest that individuals may overcome the influence of early experiences and improve their level of self-compassion in adulthood, and that compassionate relationships throughout an individual’s lifetime may weaken the influence of the self-to-self relating that was learned in childhood.

The current research has also shown that perceived maternal rejection predicts attachment anxiety and attachment avoidance, which in turn predicts FoC for self and from others. The current research findings showed that these relationships were all partially mediated. A possible explanation for this is that maternal rejection has a strong influence on a person’s internal working model as an adult, irrespective of whether their adult attachment style is anxious or avoidant. For example, an individual who perceives their mother as rejecting during their childhood may experience more negative emotions, such as self-criticism and poor self-

evaluation (Gilbert et al., 2011; Kirby et al., 2019) and be less likely to accept compassion from others or be compassionate towards themselves. Although maternal rejection has a direct relationship with FoC for self and from others, some of this relationship can be explained by attachment anxiety and avoidance. This could be because if an individual perceives their mother as rejecting them in childhood, they may develop a strong feeling of attachment anxiety and avoidance because they carry negative feelings about themselves into their adult relationships, which increases their fear of compassion for self and from others. However, the mechanisms by which attachment anxiety and avoidance work are probably different.

Individuals with attachment anxiety tend to have a negative view of themselves and question their worth, lovability and ability to acquire the love and support they desire from others. They also have a tendency to feel unable to cope with stressors and threats by themselves and rely on others as a way of gaining the support that they feel they need (Mikulincer & Shaver, 2013). This could be because they may lack the necessary emotional foundations to be compassionate towards themselves (Neff & McGehee, 2010). By contrast, attachment avoidance is explained by avoidant individuals' tendency to suppress and deny emotions and thoughts which can be activated by feeling vulnerable and dependent on others (Caldwell & Shaver, 2012). This leads to these individuals finding it difficult to recognise, understand or express their internal emotional states (Mikulincer & Shaver, 2007). With regard to fears of compassion for self and from others, both could relate to a fear of emotion and associated physiological cues which may lead to the restriction of internal experiences and how they express themselves externally, for fear of the consequences that they have anticipated. Therefore, these individuals feel emotion internally, but are restricted in how they express themselves externally.

8.5 Perceived Parenting and Social Connectedness

8.5.1 The Relationship Between Perceived Parenting and Social Connectedness

As discussed earlier, previous research supports the idea that there is a positive and significant relationship between social connectedness and self-compassion. This highlights that social connectedness may be a key mediator in the relationship between perceived parenting and different constructs of compassion.

The fifth research question aimed to explore the relationship between perceived parenting and social connectedness. The current research found a relationship between paternal and maternal emotional warmth and rejection and maternal overprotection, with social connectedness, but not paternal overprotection. Interestingly, these findings for the aforementioned relationships were the same across both of the datasets, unlike those for perceived parenting and adult attachment.

From the literature that was reviewed in Chapter Two, only two papers measured parenting and social connectedness. However, neither paper investigated the relationship between parenting and social connectedness using the same measure. Kelly and Dupasquier (2016) explored the relationship between how their participants perceived their parents and social safeness. Their results appear to be similar to those of the current research in that there was a relationship between parental emotional warmth and parental rejection and social safeness. However, they also found evidence of a relationship between parental overprotection and social connectedness, which was not the case in the current research. The second paper from the literature review was by Neff and McGehee (2010), who explored the relationship between maternal support and social connectedness. They found that there was a relationship between maternal support and social connectedness. Their findings regarding maternal support could be considered similar to those of this research with regard to maternal emotional warmth, given

that parental warmth is defined as a behaviour that conveys support, encouragement and affection (Baumrind, 1966; Steinberg, 2001).

This research and the findings of Kelly and Dupasquier (2016) and Neff and McGehee (2010) may partly explain the notion that, if an individual experiences parental warmth and nurturing early in life, it may shape the extent to which they feel a sense of connectedness. These findings are consistent with Gilbert (2005) and Gilbert et al. (2009), who coined the phrase 'social safeness', postulating that social safeness can be characterised as the tendency of an individual to feel warmth, connectedness and belonging in their social relationships (Gilbert et al., 2009). Therefore, this supports the idea that those who perceive their parents as warm, nurturing and supportive during childhood are likely to grow up with feelings of social safeness, of which social connectedness is a part. Those individuals with a high sense of social connectedness tend to have a greater sense of social belonging and seek relationships with others (Lee & Robbins, 1998). On the other hand, those who perceived their parents as rejecting in nature are less likely to feel socially connected and are more inclined to avoid social settings for fear of being rejected or left out. It could be that people who are low in terms of social connectedness may evaluate their relationships more negatively, are less assertive, and find intimacy and sociality more difficult (Lee et al., 2001).

Although there were similarities between the findings of this research and those of Kelly and Dupasquier (2016) and Neff and McGehee (2010), there were also two major differences. Kelly and Dupasquier (2016) measured both parents together for the perceived parenting variable, and Neff and McGehee (2010) only assessed maternal support. Consequently, it is difficult to demonstrate whether there were any parenting differences between fathers and mothers, especially in the case of overprotection and social connectedness. Barber et al. (1996) posited

that, when overprotection is viewed from a child development perspective, it should not be seen as benign, because it leaves children transitioning to adulthood unprepared to live independently. Secondly, Kelly and Dupasquier (2016) measured social safeness, of which social connectedness is a component, with social safeness and reassurance. Therefore, their results may not reveal anything meaningful about the specific relationship between social connectedness and perceived parenting by fathers or mothers.

8.5.2 The Mediating Role of Social Connectedness Between Parenting and Self-Compassion.

Research question five was designed to determine whether social connectedness mediated the relationship between perceived parenting in childhood and self-compassion. The current research revealed that social connectedness fully mediated the relationship between paternal and maternal emotional warmth and self-compassion; and maternal rejection and self-compassion.

Although no studies found in the systematic literature review in Chapter Two included social connectedness as a mediator, they did show associations with the key aspects of the models. Kelly and Dupasquier's (2016) findings were consistent with their hypothesis that stronger parental warmth was associated with a greater capacity for self-compassion and that social safeness might be a key mechanism through which an individual's recollection of parental warmth relates to their capacity for self-compassion. Comparing the findings of this research with those of other studies demonstrates that perceived emotional warmth in childhood is associated with a greater capacity for self-compassion via social connectedness.

As previously discussed in Chapter One, social connectedness is associated with a universal sense of belongingness in the social world (Lee & Robbins, 1995). This sense of belonging and

social connectedness is posited to develop during childhood and extend into adulthood (Baker & Baker, 1987; Lee & Robbins, 1995). If an individual has a higher level of social connectedness, they are more likely to feel close to others, perceive them as friends, and have a sense of association in social groups and activities.

Individuals who perceive their parents as warm, nurturing and supportive during childhood are more likely to feel a sense of social connectedness (a part of social safeness) in adulthood (Gilbert et al., 2009). Those with a high sense of social connectedness tend to have a greater sense of social belonging and seek relationships with others (Lee & Robbins, 1998). Feelings of social safeness may facilitate an individual's openness to self-compassion, which is underpinned by the soothing system (Gilbert, 2015). Study six in Chapter Three found that social connectedness mediated the relationship between paternal and maternal emotional warmth and self-compassion. These findings may be supported by Kelly & Dupasquier's (2016) hypothesised theoretical model which raises the possibility that a parent's (paternal and maternal) emotional warmth may shape the extent to which an individual feels a sense of social connectedness in their subsequent social relationships and that these social relationships have an effect on an individual's ability to generate compassion for themselves.

Maternal rejection is significantly related to self-compassion when mediated by social connectedness (Figure 3.6), accounting for approximately 31% of the variance in self-compassion ($R^2=.31$). This may mean that social connectedness is a key mechanism through which perceived maternal rejection relates to an individual's capacity for self-compassion. Social connectedness also mediated the relationship between maternal rejection and self-compassion. Previous results produced in this research indicate that social connectedness is positively linked with self-compassion but negatively related to perceived maternal rejection.

This may be because individuals who do not grow up feeling warmth and security within a family environment may find it challenging and even frightening to try to comfort themselves with compassion. This is consistent with previous research that has demonstrated links between insecure attachment and low levels of social safeness (Kelly et al., 2016) and low self-compassion (Wei et al., 2011), thus corroborating the findings of this research.

Lee and Robbins (1995) argue that those who experience acute and repeated rejection and isolation are more likely to develop low social connectedness in adulthood. This could explain why the findings of the current research show that if an individual perceives childhood parenting experiences as high in terms of parental rejection, they are likely to develop low social connectedness and consequently low self-compassion. Thus, those who perceive their parents as showing little emotional warmth are likely to encounter difficulties in being compassionate towards themselves. Like attachment anxiety, social connectedness could explain some of the relationship between maternal rejection and self-compassion.

8.5.3. The Mediation Role of Social Connectedness in the Relationship Between Perceived Parenting and The Three Orientations of Compassion

Due to the CEAS (Gilbert et al., 2017) being a newer measure than the SCS (Neff, 2003b) and the FCS (Gilbert et al., 2011), few papers have explored the relationship between perceived parenting and the three orientations of compassion so far. The mediation model using the CEAS has produced some interesting results. Gilbert et al. (2011) found that, of the three orientations of compassion, compassion for others was the most feared of the orientations. Again, self-criticism reduces an individual's ability to be open, perhaps because they feel ashamed or unsafe (Gilbert et al., 2012) due to perceived parental rejection in childhood. These results are similar to those for attachment anxiety, albeit in different directions. Although the Compassion

Engagement and Action Scale orientations are grouped in the same way as those in the Fear of Compassion ‘flows’ (for self, for others, from others), these measures are distinct - not opposites - and therefore, produced different results.

The relationships between paternal emotional warmth and compassion for self and from others (receiving compassion); and maternal emotional warmth and compassion from others, were fully mediated by social connectedness. As with self-compassion, these findings support the hypothesis posited by Kelly et al. (2016) that paternal and maternal emotional warmth may shape an individual’s sense of social connectedness in adulthood, and that these relationships relate to the ability to generate compassion for themselves or receive it from others. However, the relationship between maternal emotional and compassion for self, was only partially mediated by social connectedness.

The association between paternal and maternal rejection and compassion for self, was only partially mediated by social connectedness. Interestingly, the relationship between paternal and maternal rejection and compassion from others was mediated by social connectedness. Although neither full nor partial mediation could be established, indirect mediation may have taken place. The relationship between maternal overprotection and compassion for self was fully mediated by social connectedness. This result is particularly interesting because it is the only overprotection model for which social connectedness was found to have a significant mediation effect.

Compassion for others resulted in very different types of mediations across the parenting behaviours. Paternal overprotection was partially mediated, while maternal emotional warmth was fully mediated. Although there was an indirect effect for maternal rejection, it was difficult to draw any firm conclusions about the mediatory effect due to the direct effect and total effect

being insignificant. Throughout the mediation models, maternal rejection was the one constant measure of perceived parenting that showed significant mediation effects. However, regardless of whether social connectedness plays a protective role or not, the relationship between maternal rejection and the different dimensions of compassion was mediated with the presence of adult attachment or social connectedness.

8.5.4 The Mediating Role of Social Connectedness in the Relationship Between Perceived Parenting and Fears of Compassion

It has been suggested that high paternal and maternal rejection and high maternal overprotection affect an individual's level of FoC for others, both directly and via social connectedness. As previously mentioned, the relationship between maternal rejection and FoC for others remains significant. It appears to strongly influence maternal parenting in regard to the self-to-self relating of an individual as an adult, irrespective of the influence of social connectedness. Although some of the relationship is predicted via social connectedness, and therefore how socially connected someone feels, maternal rejection has a direct impacts on the degree of fear of compassion for others that an individual feels. This may be because they do not have the capacity to give compassion either through a lack of awareness or the ability to relate to others in a compassionate way.

No known previous study has conducted a mediation analysis to evaluate the relationship between paternal warmth and FoC for self and from others, which makes it difficult to fully interpret the results. However, the results concerning the indirect effects are promising due to the high percentage of variance in FoC for self and from others (45% - 52%) that they account for. It is somewhat surprising that social connectedness did not mediate the relationship

between maternal emotional warmth and FoC for others; this finding indicates that fear of giving compassion and fear of receiving compassion work differently and to differing degrees.

Similarly, a study by Best et al. (2021) explored the relationship between loneliness, subjective happiness, social connectedness, social safeness, and FoC in an Australian population. FoC for others had the weakest negative correlation out of the three flows of FoC. Their findings regarding FoC for self and from others produced a strong association, whereas a moderate association was found in relation to FoC for others.

Social connectedness mediated the relationship between paternal and maternal rejection and FoC. However, only paternal rejection and FoC for self fully mediated the relationship. This could be because paternal rejection has a longer or stronger effect on an individual's life. Paternal and maternal rejection and social connectedness accounted for only 17%-20% of the variance in FoC for others, whereas the variance was 46%-56% for FoC for self and from others. This goes some way towards showing that it may be more difficult for individuals to receive compassion than to give compassion, as also demonstrated with regard to emotional warmth.

As was the case with compassion for self, for others and from others, discussed earlier, maternal rejection once again appears to be a constant measure by which social connectedness mediates these relationships.

Overall, social connectedness is a key aspect of human development (Jose & Crespo, 2012). These findings support the importance of the role played by social connectedness in the relationship between perceived parenting and compassion.

8.6 The Relationship Between Adult Attachment and Social Connectedness

A preliminary analysis of the single mediation models was run separately for adult attachment and for social connectedness, separately, and where (full or partial) mediation had taken place, a serial mediation was run. The following sections aim to answer the research question about whether adult attachment and social connectedness mediate the relationship between compassion and perceived parenting behaviour.

There is extensive literature on associations between the variables of parenting styles, adult attachment, social connectedness, and self-compassion. However, the studies conducted as part of the current research are the first to investigate the relationship between perceived parenting and self-compassion when mediated by adult attachment and social connectedness. Correlational analysis conducted in this research revealed a modest and significantly negative relationship between adult attachment style and social connectedness. As previously discussed, this research measured adult attachment as a two-dimensional construct of attachment anxiety and avoidance and found significant and negative correlations between both adult attachment styles and social connectedness.

Only one study (Neff & McGehee, 2011) from the systematic literature review explored adult attachment style and social connectedness. Although social connectedness was found to have a negative and significant correlation with attachment anxiety, this was not the case for attachment avoidance. Neff and McGehee (2011) measured attachment avoidance using Bartholomew and Horowitz's four-category model (1991), which classifies attachment avoidance into two concepts: dismissing attachment (high attachment avoidance and low attachment anxiety); and fearful attachment (high insecurity on attachment avoidance and attachment anxiety). Only fearful attachment was negative and significantly correlated with

social connectedness. A positive and non-significant association was found for dismissive attachment, making it challenging to compare the results with previous research on attachment avoidance.

One of the first decisions was to either use ECR-R questions according to how the author set them out or to randomly mix the order of questions. The decision was made to use the authors Fraley et al., (2000) set up rather than randomly mixing the order of questions. Attachment anxiety represents the odd numbered questions, and attachment avoidance on even numbered questions. This may reduce the potential of human error in the calculation of the scores for the two dimensions and it was thought unlikely to improve the scores if the questions were randomised.

Another decision when using the ECR-R is it has 14 of its 36 items that when answered are reverse scored. It is debatable whether reverse scoring has a negative impact on what it is measuring. However reverse items can be used as a way of controlling acquiescence which is where there is an unconscious bias to agree to the question. It could be used to slow down the reader which may have a positive impact upon the respondents' answers. Also reverse scoring can increase the validity of the scale by representing the underlying mechanism it is measured against. An additional consideration was to determine whether to use the dimensional or categorical way of assessing adult attachment. It was decided to use dimensional models of attachment because it was better suited for measuring individual differences in attachment style because theoretically and practically people vary continuously not categorically.

As previously discussed in the Introduction, adult attachment and social connectedness are rooted in early childhood experiences. Consequently, the results of this research for adult

attachment and social connectedness may be associated with an individual's perception of parenting in childhood. Through correlational analysis, this research showed that attachment styles and social connectedness were related to perceived parenting and compassion and also that there is an association between attachment styles and social connectedness. Although both may be rooted in early childhood experiences, adult attachment can be conceived of as more of an individual current relationship, whereas social connectedness is a long-term interpersonal sense of belonging within society. Therefore, the mediators used in this research attempted to facilitate a deeper understanding of the complexity of the relationship between parenting and compassion (perceived parenting → adult attachment → social connectedness → compassion).

The serial mediation pathway with adult attachment building on social connectedness exhibited a slightly stronger fit. This provided possible evidence that both play an important role in the association between parenting and compassion. Therefore, serial mediation was considered an important tool for exploring the complex mechanisms by which the variables operate (Hayes, 2017) and the applicability of the underlying theories about the relationship between perceived parenting and compassion.

8.6.1 The Mediating Role of Adult Attachment and Social Connectedness in the Relationship Between Parenting and Self-compassion

As a single mediator, attachment anxiety was previously shown to mediate the relationship between maternal rejection and self-compassion. This finding aligns with Pepping et al.'s (2015) research relating to individual differences in self-compassion. The results of the current work extend prior knowledge accrued from research conducted on the effect of perceived parenting and attachment anxiety on variability in self-compassion. It was further found that social connectedness mediates the relationship between perceived parenting and self-

compassion. As mentioned previously, these results were consistent with the links demonstrated between insecure attachment and low social safeness (Kelly et al., 2016) and low self-compassion (Wei et al., 2011) in other studies. Li et al. (2012) argue that parental rejection reflects parenting that is dysfunctional, whilst parental emotional warmth reflects parenting that is functional. Therefore, when maternal rejection is regarded as dysfunctional parenting, this suggests that high maternal rejection may negatively shape an individual's sense of adult attachment and social connectedness, which makes it more difficult for an individual to generate compassion for themselves.

From the mediation models presented it was further discovered that attachment anxiety and social connectedness serially and fully mediated the relationship between maternal rejection and self-compassion, accounting for 38% of the variability in self-compassion ($R^2 = .383$). This serial mediation model yielded a significant and negative result, indicating that an individual who perceived high maternal rejection in childhood would have a predicted low capacity for self-compassion, when mediated by attachment anxiety and social connectedness.

The results of this research provide evidence that it may be important to more closely explore the relationship between maternal rejection and self-compassion, which is fully mediated by attachment anxiety and social connectedness. As most studies are based on correlation analysis, a causal connection between the variables cannot be assumed. Despite the small effect size, there was an 8% increase in the variance in self-compassion.

The present study was the first to examine adult attachment and social connectedness as serial mediators of the relationship between perceived parenting and self-compassion. Maternal rejection was the only perceived parenting behaviour to be mediated across all three mediation

models. To explore this relationship further, the results obtained from the three meditation models using different compassion measures are discussed in the next section.

8.6.2 The Mediating Role of Adult Attachment and Social Connectedness in the Relationship Between Perceived Parenting and Three Orientations of Compassion

By far the most interesting results were those regarding the relationship between perceived parenting and compassion engagement and action. Compassion for self was the only relationship that was mediated by attachment anxiety and social connectedness, where both of the single mediation models were significant.

The results of the current research suggest that an individual's capacity for compassion for self may not be directly associated with their perception of their father's emotional warmth. However, this relationship may be explained via an individual's level of attachment anxiety and social connectedness. Even so, paternal emotional warmth, attachment anxiety and social connectedness predict an individual's compassion for self. However, the emotional warmth of an individual's mother may have a direct effect on their compassion for self, irrespective of their attachment anxiety and social connectedness.

Attachment anxiety and social connectedness partially mediated the relationship between paternal and maternal rejection and compassion for self. The variance in compassion for self was very similar (31%-32%). This is in contrast to the findings regarding emotional warmth, for which there appeared to be differences in the parental roles of the father and mother.

Finally, the relationship between maternal overprotection and compassion for self was fully mediated by attachment anxiety and social connectedness. These findings suggest that, when

mediated by attachment anxiety and social connectedness, maternal overprotection may be associated with low compassion for self.

Overall, similar patterns were observed in the results, showing that maternal rejection consistently had a relationship with compassion for self when mediated by attachment anxiety and social connectedness. However, it should be kept in mind that these studies conducted as part of the current research are the first to investigate the relationship between perceived parenting and self-compassion when mediated by adult attachment and social connectedness.

8.6.3 The Mediating Role of Adult Attachment and Social Connectedness in the Relationship Between Perceived Parenting and Fears of Compassion

The relationship between high paternal emotional warmth and fear of compassion for self was fully mediated by attachment anxiety and social connectedness, accounting for 47% of the variance in fear of compassion for self. However, the relationship between maternal rejection and fears of compassion for self and from others was only partially mediated by attachment anxiety and social connectedness, suggesting that attachment anxiety and social connectedness only accounts for some of the relationship between maternal rejection and fear of compassion for self or from others (52%-62%). This means that the relationship between maternal rejection and FoC for self still explains some of the variance in receiving compassion. In the case of the relationship between maternal rejection and FoC for others, it was found to be partially mediated by attachment anxiety and social connectedness.

8.7 Summary

This research explored whether social connectedness mediated the relationship between parenting and compassion to try to understand more about its individual power. Social

connectedness mediated many of the relationships and, therefore, it was determined that social connectedness, separately from other factors, may affect an individual's capacity for compassion.

Due to the strength of attachment and social connectedness as single mediators, it was posited that combining them may provide further evidence regarding the variance in compassion. Although the direction of the mediation is unknown and the mediation was not conducted to determine causality, it was suggested by the previous single mediation results that a serial mediation may provide a stronger effect. However, the serial mediation only increased the variance from between 1% to 7%. Although social connectedness was a strong single mediator, it was not strong enough to neutralise the effect of attachment anxiety. The small increase in the variance could be due to both the mediators competing against each other or an unknown factor mediating or moderating the relationship. There were differences in the results for both parents, which suggest that the parenting roles of the father and mother predict the relationship with compassion, and the effect is further accentuated when mediated by attachment anxiety and social connectedness.

8.8 Strengths and Limitations

The research presented in this thesis has several strengths. The first is that it appears to be the first to explore the mediatory roles of adult attachment and social compassion in the relationship between perceived parenting and compassion. Seemingly, it is also the first to investigate different aspects of compassion: self-compassion (SCS; Neff, 2003b); fears of compassion (FoC; Gilbert et al., 2011); and the three orientations of compassion (CEAS; Gilbert et al., 2017) in mediation research.

Another strength of the thesis is that it revealed the potential parenting differences in terms of fathers' and mothers' relationships with compassion in each of the mediation models. This research highlighted the finding that maternal rejection was the only perceived parenting behaviour to consistently and significantly predict adult attachment, social connectedness and compassion. Although not the main focus of this research, such findings may pave the way for future research to further investigate why differences in parenting styles, and maternal rejection in particular, has a relationship with the different orientations or flows of compassion. Finally, the research was exploratory and captured three orientations of compassion as well as the more widely used measure of self-compassion.

The current study had several limitations that should be considered in context. Firstly, the studies in this thesis were of cross-sectional design, and therefore no causal associations could be established. This is important in the case of mediation analysis, as it precludes any conclusions being drawn regarding the nature of the associations that were observed. It is also unclear whether social connectedness precedes attachment anxiety or vice versa. An assumption was made that the serial mediation model correctly represents the causal order of the variables. Due to the fact that the serial mediation models used in this research have not been employed in other studies in the current literature, the validity of this assumption is unknown and should therefore be evaluated by researchers in the context of future intervention research. Additionally, the cross-sectional design does not analyse the behaviour over a period of time. For example, a respondent's mood can distort their recall at the time of taking the questionnaire (Petrowski et al., 2009). This raises the possibility that subjective perceptions are being evaluated rather than actual parenting practices (Brewin et al., 1993) and, therefore, the potential exists for memory biases to occur. However, Parker (1984) argues that an individual's perceptions of their parenting during childhood are often more relevant than the actual

parenting behaviours in terms of predicting psychosocial outcomes. What is clear is that longitudinal studies will be needed to examine the long-term effects of early childhood experiences regarding different periods of life, as well as the temporal order of the association between adult attachment and social connectedness and their potential mediatory relationship.

Secondly, due to the exploratory nature of the research and the measures that it included, the non-completion rate might have been due to the number of measures used and the number of questions included, which consequently increased the length of time needed to complete the questionnaire. Although the sample size met the minimum requirement calculated, the studies could have been improved by investigating a larger sample size. Added to this, with regard to the theoretical underpinnings, there is a lack of consensus on the definition of compassion and the most effective way to measure it (Kirby et al., 2017; Strauss et al., 2016). Therefore, caution should be exercised when comparing the outcomes of the compassion measures, particularly in regard to self-compassion, due to the context in which the theoretical underpinnings of compassion were set. Additionally, in an attempt to understand the role of the key components of the mediation models, in this research the total CEAS and SCS scores were used for measuring compassion. This enabled the volume of analysis to be reduced, but many of the correlations between the variables were established. Although this allowed for the inclusion of more compassion measures, there is a risk that nuances between the constructs could have been overlooked. Lastly, given that the majority of the sample comprised young, white females from the United Kingdom, the findings may be limited in their generalisability outside of the UK.

8.9 Future Directions

Firstly, future research may consider evaluating the causal relationships between perceived parenting, adult attachment, social connectedness and compassion. For example, longitudinal

methods may be able to establish consistency or change over time in certain psychosocial constructs and the relationships between them. Secondly, conducting more mediation studies to investigate individual differences in compassion across the different measures of compassion could help to establish a conceptual model or theory of change. Thirdly, further research may be useful to investigate why avoidance and overprotection did not appear to be significantly associated with compassion, as might have been hypothesised. Fourth, research could examine different family structures (e.g. multigenerational households, single parent families, couples living apart, etc.) and consider how these may predict adult attachment and social connectedness in relation to compassion, as well as the degree to which different beliefs and cultural values may impact on these relationships.

8.10 Conclusion

The present study is the first to examine adult attachment and social connectedness as serial mediators of the relationship between perceived parenting in childhood and different compassion measures. This research established that adult attachment - mainly attachment anxiety - mediated compassion. It was also established that social connectedness mediated this relationship. When adult attachment and social connectedness serially mediated the relationship between perceived parenting in childhood and compassion, there was little increase in the amount of variance in compassion that could be accounted for. Notable patterns that emerged were that maternal rejection was consistently related to self-compassion, compassion for self and fears of compassion for self when mediated by adult attachment and social connectedness. It appeared that the mediators competed against each other and thus the true size of their effect was not reflected in the model, and there may also be other unknown factors involved in the relationship. This highlights the complexity of the relationship between perceived parenting and compassion.

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APPENDIX AA

Table 1. Summary Table of Literature Review

No.	Author and Year	Population	N recruited	Measures of parenting	Measures of Attachment	Measures of social connectedness	Measures of Compassion	Method of Analysis	Purpose of Study
1	Arambasic et al (2021)	Members of the Review and Survey Group of Breast Cancer Network Australia	82		ECR-R		SCS	Mediation	The association between attachment styles and psychological adjustment of long-term breast cancer survivors and whether lower self-compassion underlies this association.
2	Beduna et al (2019)	Graduate and undergraduate students enrolled at a University in Indiana, USA	322		ECR-S		SCS-SF	Structural equation modeling	Factors such as self-compassion, attachment security and emotion regulation, could attenuate the relationship between bullying in childhood and shame in adulthood.
3	Best et al (2021)	Adults - Online Survey	177			SConS	FCS	Correlation	Explore loneliness and its relationship social connectedness, social safeness, subjective happiness, and fears of compassion
4	Bolt et al (2019)	Individuals in romantic relationships in the UK & USA	342		ECR-S		SCS-SF	Mediation	Investigated whether self-compassion and compassion towards one's partner mediated this association.
5	Bugay-Sökmez et al (2021)	University Students in Turkey	510		ECR-S (Turkish version)		SCS-SF (translated in Turkish)	Mediation, Moderation	Examined mediating, and moderating effects of attachment dimensions (anxiety and avoidance), self-esteem, and self-compassion on dimensions of rumination (brooding and reflection) and co-rumination.
6	Carbonneau et al (2021)	French-Canadian young adult women	201		ECR-S		SCS-SF	Structural equation modeling	Examined the association between adult attachment (anxiety and avoidance) and intuitive eating, and the mediating role of self-compassion.

cont.

7	Farnsworth et al (2016)	US (South-central region) Undergraduate students	912	SES-R	SCS	Mediation & Structural Equation Modelling	Explored the impact of emotionally validating/invalidating caregiver behaviour on fear of emotion, spirituality and self-compassion.
8	Haag (2019)	Online community sample - USA	471	ECR-R	SCS	Mediation	The relationship between attachment anxiety and anabolic depression when mediated by self-compassion and moderated by empathic functioning.
9	Homan (2016)	Community older adults	126	ECR	SCS-SF	Mediation	Explored the relationships between attachment style and eudaimonic wellbeing mediated by self-compassion.
10	Joeng et al (2017)	Korean College Students	473	ECR-R (Korean version).	SCS (translated to Korean)	Structural equation modeling	Examined the mediation of self-compassion and fears of compassion between insecure attachment styles and emotional distress.
11	Kelly & Dupasquier (2016)	Female Undergraduate students at a	153	s-EMBU	SCS FCS	Mediation	Tested the theory that feelings of social safeness might be a key mechanism through parental warmth and
12	Liu et al (2020)	Asian Americans from a West Coast public university USA	205	SConS	SCS	Moderation	Examined the interaction of racial discrimination, self-compassion and social connectedness on depression.
13	Mackintosh et al (2017)	Clinical Patients with anxiety and depression - UK	74	ECR-R	SCS	Mediation	Examined the role of self-compassion and its relationship with attachment and interpersonal problems.
14	Moreira et al (2016)	Mothers of school-aged children and adolescents - Portugal	290	ECR-RS	SCS (translated to Portuguese)	Mediation	Examined the association of attachment anxiety and avoidance with mindful parenting through self-compassion.

cont.

		148	ECR-R	SCS	Serial mediation	The relationship between attachment avoidance and depression when mediated by thought suppression and self-compassion.
15 Murray et al (2020)	General public (online) and first year psychology students - Australia	148	ECR-R	SCS	Serial mediation	The relationship between attachment avoidance and depression when mediated by thought suppression and self-compassion.
16 Naismith et al (2018)	Participants with personality disorder awaiting treatment at out-patient service -	53	EMWSS ECR-S	SCS-SF & FCS	Correlations	Explored possible origins of self-compassion, FSC, shame, and self-criticism with their associations with attachment.
17 Neff & McGehee (2010)	Private School and college students - USA	235/287	RQ	SCS SCons	Correlations	Examine self-compassion among adolescents and young adults.
18 Øverup et al (2017)	University Students - USA	370	ECR-R	SCS-SF	Mediation	Examined the relationship between attachment and depression and potential mediators of self-compassion, and perceptions of belonging and burdensomeness
19 Pepping et al (2015)	First year undergraduate psychology students from Griffith University - Australia	329	s-EMBU ECR-R	SCS	Mediation	Examined whether retrospective parenting received in childhood predicts individual difference in self-compassion and whether attachment (anxiety and avoidance) mediates the
20 Potter et al (2014)	General Population (online)	211	FMPS	SCS	Mediation	Examined self-compassion (self-warmth and self-coldness) as mediators between parental criticism and social
21 Raque-Bogdan et al (2016)	First year college women from a Mid-Atlantic University - USA	1306	ECR-RS	SCS	Mediation	Examined self-compassion as a mediator between attachment anxiety and body appreciation.

cont.

22	Satici & Akin (2015)	University Students in Turkey	268	ELES	SCS - SF (translated to Turkish)	Structural Equation Modeling	Examined the relationships between early life experiences and self-compassion.
23	Wang et al (2023)	University in Fujian Province in China	684	PBI	FCS	Structural Equation Modeling	Examined the mediating role of self-acceptance between parenting behaviours and fear of compassion for self and from others.
24	Wei et al (2011)	College Students who were currently or had been in a committed relationship - USA	195	ECR	SCS	Mediation	Examined the association between attachment anxiety and subjective well-being when mediated by self-compassion. Examined the empathy towards others as a mediator between attachment avoidance and subjective
25	Westphal et al (2016)	Psychotherapy patients at a private mental-health clinic. - USA	326	MOPS	SCS-SF	Mediation	Investigated the relationship between adverse parenting in childhood and adult psychopathology and whether self-compassion and emotional validation explains the relationship.

Note = Listed in this table are only the measures of interest (parenting, adult attachment, social connectedness and compassion)

ECR = Experiences in Close Relationships Scale; ECR-R = Experiences in Close Relationships Scale - Revised; ECR-S = Experiences in Close Relationships Scale - Short Form

ECR-RS = Experiences in Close Relationships Structures Scale; SCS-SF = Self-Compassion Scale - Short Form; FCS = Fears of compassion scale;

SConS = Social connectedness scale; SES-R = Socialization of Emotion Scale – Revised; s-EMBU = Short-Egna Minnen Beträffande Uppfostran : Memories of Upbringing;

EMWSS = Early Memories of Warmth and Safeness Scale; RQ = The Relationship Questionnaire; FMPS = Frost Multidimensional Perfectionism Scale;

ELES = Early Life Experiences Scale; PBI = Parental Bonding Instrument; MOPS = The Measure of Parenting Style

APPENDIX A

s-EMBU Scale

Instructions

Below (see Table 1) are a number of questions concerning your childhood. Please read through the following instructions carefully before filling out the questionnaire. Even if it is difficult to recall exactly how our parents behaved towards us when we were very young, each of us does have certain memories of what principles they used in our upbringing. When filling out this questionnaire, it is essential that you try to remember your parent's behavior towards you as you yourself experienced it. You will find a number of questions, to be answered according to different alternatives. For each question, you must circle the alternative applicable to your own mother's and father's behavior towards you. Be careful not to leave any questions unanswered. We are aware that certain questions are impossible to answer if you do not have any sister(s) or brother(s) or if you have been raised by one parent only. In this case, leave these questions unanswered.

For each question, please circle the responses applicable to your mother's and father's behavior towards you. Read through each question carefully and consider which one of the possible answers applies to you. Answer separately for your mother and your father.

Table 1 is an example to illustrate how you should fill out the questionnaire.

Table 1

Item	
(1)	It happened that my parents were sour or angry with me without letting me know the cause
(2)	My parents praised me
(3)	It happened that I wished my parents would worry less about what I was doing
(4)	It happened that my parents gave me more corporal punishment than I deserved
(5)	When I came home, I then had to account for what I had been doing, to my parents
(6)	I think that my parents tried to make my adolescence stimulating, interesting and instructive (for instance by giving me good books, arranging for me to go on camps, taking me to clubs)
(7)	My parents criticized me and told me how lazy and useless I was in front of others
(8)	It happened that my parents forbade me to do things other children were allowed to do because they were afraid that something might happen to me
(9)	My parents tried to spur me to become the best
(10)	My parents would look sad or in some other way show that I had behaved badly so that I got real feelings of guilt
(11)	I think that my parents anxiety that something might happen to me was exaggerated
(12)	If things went badly for me, I then felt that my parents tried to comfort and encourage me
(13)	I was treated as the 'black sheep' or 'scapegoat' of the family
(14)	My parents showed with words and gestures that they liked me
(15)	I felt that my parents liked my brother(s) and/or sister(s) more than they liked me
(16)	My parents treated me in such a way that I felt ashamed
(17)	I was allowed to go where I liked without my parents caring too much

(18)	I felt that my parents interfered with everything I did
(19)	I felt that warmth and tenderness existed between me and my parents
(20)	My parents put decisive limits for what I was and was not allowed to do, to which they then adhered rigorously
(21)	My parents would punish me hard, even for trifles (small offenses)
(22)	My parents wanted to decide how I should be dressed or how I should look
(23)	I felt that my parents were proud when I succeeded in something I had undertaken

The scoring key for the s-EMBU is given in Table 3.

Coding/answer alternatives for each item are: 'No, never' =1, 'Yes, but seldom'=2, 'Yes, often'=3, 'Yes, most of the time' =4. Please observe that item No. 17 should be recoded as follows: 1=4, 2=3, 3=2, 4=1.

The item Nos. for the s-EMBU correspond with the following item Nos. in the early 81-item version: 1=76, 2=48, 3=66, 4=23, 5=46, 6=47, 7=59, 8=18, 9=38, 10=25, 11=73, 12=21, 13=33, 14=2, 15=16, 16=17, 17=69, 18=1, 19=74, 20=70, 21=64, 22=14 and 23=78.

Table 2

		No, never	Yes, but seldom	Yes, often	Yes, most of the time
It happened that my parents were sour or angry with me without letting me know the cause	F	1	2	3	4
	M	1	2	3	4
My parents praised me	F	1	2	3	4
	M	1	2	3	4

In the questionnaire, F is father and M mother.

NOTE: On Qualtrics this table (2) rather than a circled numbers will be represented as an aerial button, one column will answer for the mother and the other for the father.

Table 3

Scoring key for the s-EMBU

		No. of items
Rejection	11,4,7,13,15,16,21	7
Emotional Warmth	2,6,12,14,19,23	6
(Over) protection	3,5,8,10,11,17*,18,20,22	9

*Reversed scoring 1=4, 2=3, 3=2, 4=2

APPENDIX B

A three Factor Structural Equation Model for Parenting Styles

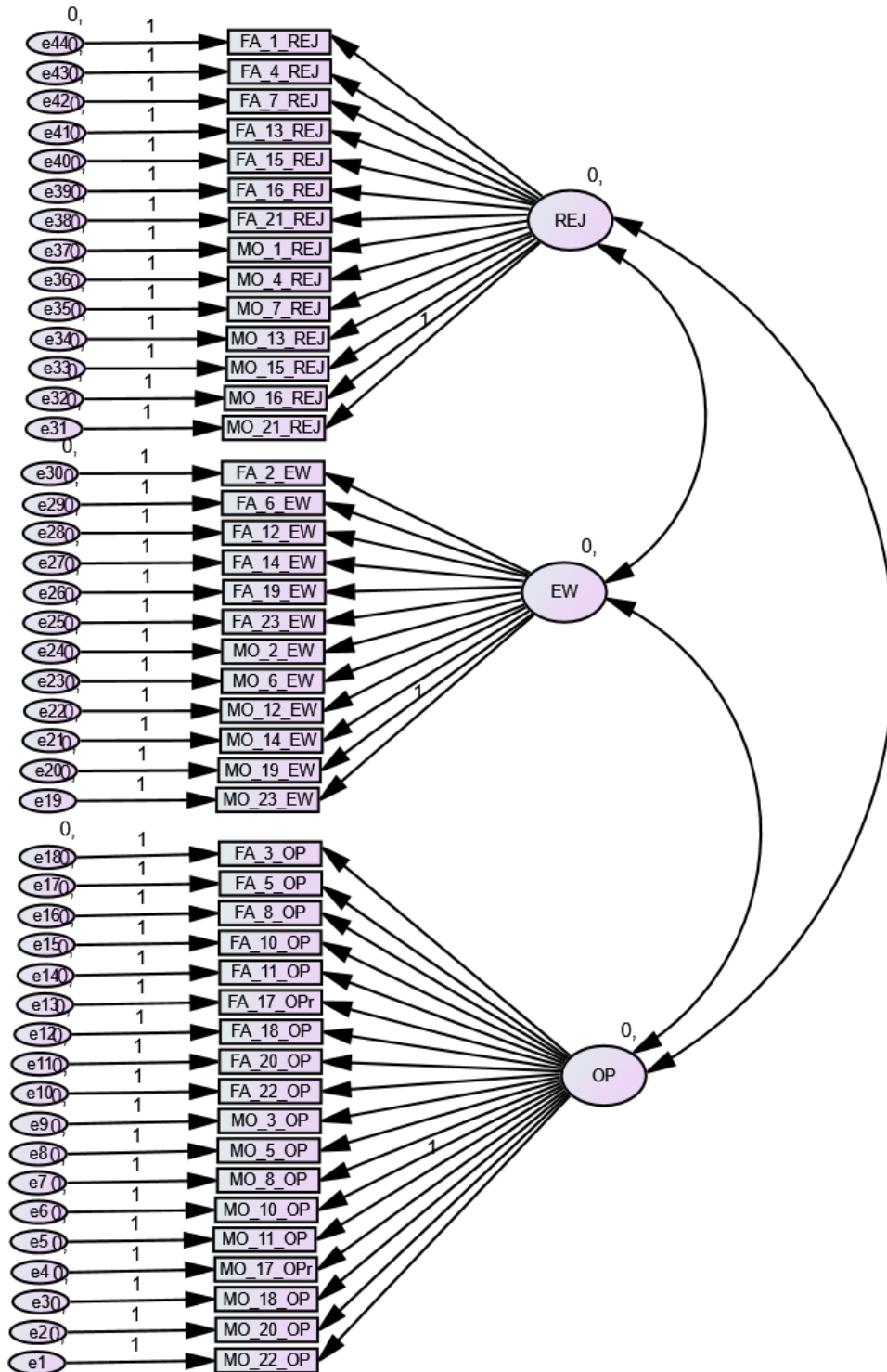


Figure 1: Model 9: A 3-factor model of parenting styles for father and mother combined (rejection, emotional warmth and overprotectiveness), including item 9.

APPENDIX C

Compassionate Engagement and Action Scales

Self-compassion

When things go wrong for us and we become distressed by setbacks, failures, disappointments or losses, we may cope with these in different ways. We are interested in the degree to which people can **be compassionate with themselves**. We define compassion as “a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it.” This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful to us. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to you if you become distressed. Please rate the items by circling the number using the following rating scale:

Never Always

1 2 3 4 5 6 7 8 9 10

Section 1 – These are questions that ask you about how motivated you are, and able to engage with distress when you experience it. So: When I’m distressed or upset by things...

		Never								Always			
1.	I am <i>motivated</i> to engage and work with my distress when it arises.	1	2	3	4	5	6	7	8	9	10		
2.	I <i>notice</i> , and am <i>sensitive</i> to my distressed feelings when they arise in me.	1	2	3	4	5	6	7	8	9	10		
3.	I avoid thinking about my distress and try to distract myself and put it out of my mind.	1	2	3	4	5	6	7	8	9	10		
4.	I am <i>emotionally moved</i> by my distressed feelings or situations.	1	2	3	4	5	6	7	8	9	10		
5.	I tolerate the various feelings that are part of my distress.	1	2	3	4	5	6	7	8	9	10		
6.	I reflect on and make sense of my feelings of distress.	1	2	3	4	5	6	7	8	9	10		
7.	I do not tolerate being distressed.	1	2	3	4	5	6	7	8	9	10		
8.	I am accepting, non-critical and non-judgemental of my feelings of distress.	1	2	3	4	5	6	7	8	9	10		

Section 2 – These questions relate to how you actively cope in compassionate ways with emotions, thoughts and situations that distress you. So: When I’m distressed or upset by things...

		Never								Always	
1.	I direct my attention to what is likely to be helpful to me.	1	2	3	4	5	6	7	8	9	10
2.	I think about and come up with helpful ways to cope with my distress.	1	2	3	4	5	6	7	8	9	10
3.	I don’t know how to help myself.	1	2	3	4	5	6	7	8	9	10
4.	I take the <i>actions</i> and do the things that will be helpful to me.	1	2	3	4	5	6	7	8	9	10
5.	I create inner feelings of support, helpfulness and encouragement.	1	2	3	4	5	6	7	8	9	10

Compassion to others

When things go wrong for other people and they become distressed by setbacks, failures, disappointments or losses, we may cope with their distress in different ways. We are interested in the degree to which people can be **compassionate to others**. We define compassion as “a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it.” This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to you when **people in your life** become distressed. Please rate the items by circling the number using the following rating scale:

Never Always

1 2 3 4 5 6 7 8 9 10

Section 1 – These are questions that ask you about how motivated you are, and able to engage with other people’s distress when they are experiencing it. So: When others are distressed or upset by things...

		Never								Always	
1.	I am motivated to engage and work with other peoples’ distress when it arises.	1	2	3	4	5	6	7	8	9	10

2.	I notice and am sensitive to distress in others when it arises.	1	2	3	4	5	6	7	8	9	10
3.	I avoid thinking about other peoples' distress, try to distract myself and put it out of my mind.	1	2	3	4	5	6	7	8	9	10
4.	I am emotionally moved by expressions of distress in others.	1	2	3	4	5	6	7	8	9	10
5.	I tolerate the various feelings that are part of other people's distress.	1	2	3	4	5	6	7	8	9	10
6.	I reflect on and make sense of other people's distress.	1	2	3	4	5	6	7	8	9	10
7.	I do not tolerate other peoples' distress.	1	2	3	4	5	6	7	8	9	10
8.	I am accepting, non-critical and non-judgemental of others people's distress.	1	2	3	4	5	6	7	8	9	10

Section 2 – These questions relate to how you actively respond in compassionate ways when other people are distressed. So: When others are distressed or upset by things...

		Never										Always									
1.	I direct attention to what is likely to be helpful to others.	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
2.	I think about and come up with helpful ways for them to cope with their distress.	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
3.	I don't know how to help other people when they are distressed.	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
4.	I take the actions and do the things that will be helpful to others.	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10
5.	I express feelings of support, helpfulness and encouragement to others.	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10

Compassion from others

The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful to us or others. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to the **important people in your life** when you become distressed. Please rate the items by circling the number using the following rating scale:

Never

Always

1 2 3 4 5 6 7 8 9 10

Section 1 – These are questions that ask you about how motivated you think others are, and how much they engage with your distress when you experience it. So: When I'm distressed or upset by things...

		Never									Always
1.	Other people are actively motivated to engage and work with my distress when it arises.	1	2	3	4	5	6	7	8	9	10
2.	Others notice and are sensitive to my distressed feelings when they arise in me.	1	2	3	4	5	6	7	8	9	10
3.	Others avoid thinking about my distress, try to distract themselves and put it out of their mind.	1	2	3	4	5	6	7	8	9	10
4.	Others are emotionally moved by my distressed feelings.	1	2	3	4	5	6	7	8	9	10
5.	Others tolerate my various feelings that are part of my distress.	1	2	3	4	5	6	7	8	9	10
6.	Others reflect on and make sense of my feelings of distress.	1	2	3	4	5	6	7	8	9	10
7.	Others do not tolerate my distress.	1	2	3	4	5	6	7	8	9	10
8.	Others are accepting, non-critical and non-judgemental of my feelings of distress.	1	2	3	4	5	6	7	8	9	10

Section 2 – These questions relate to how others actively cope in compassionate ways with emotions and situations that distress you. So: When I'm distressed or upset by things...

		Never									Always
1.	Others direct their attention to what is likely to be helpful to me.	1	2	3	4	5	6	7	8	9	10
2.	Others think about and come up with helpful ways for me to cope with my distress.	1	2	3	4	5	6	7	8	9	10
3.	Others don't know how to help me when I am distressed	1	2	3	4	5	6	7	8	9	10
4.	Others take the actions and do the things that will be helpful to me.	1	2	3	4	5	6	7	8	9	10
5.	Others treat me with feelings of support, helpfulness and encouragement.	1	2	3	4	5	6	7	8	9	10

APPENDIX D

Demographic Information Questionnaire for Study One

1. What is your age? _____

1b. What is your gender

- a. Male
 b. Female
 c. Other
 d. Prefer not to say

2. What is your marital status?

- a. Single /Never married
 b. Married
 c. Living with partner
 d. Separated / Divorced
 e. Widowed
 f. Civil Partnership

3. What is your ethnic group? (Choose one section and tick appropriate box)

- a. White
 i. British
 ii. Irish
 iii. Any other White background, please state _____
- b. Black or Black British
 i. Caribbean
 ii. African
 iii. Any other Black background, please state _____
- c. Mixed
 i. White and Black Caribbean
 ii. White and Black African
 iii. White and Asian
 iv. Any other Mixed background, please state _____
- d. Asian or Asian British
 i. Indian
 ii. Pakistani
 iii. Bangladeshi
 iv. Any other Asian background, please state _____
- e. Chinese or Other ethnic group
 i. Chinese
 ii. Other Ethnicity (please state) _____

4. In which country do you currently live? (Please state) _____

5. What is the highest level of education qualification you have obtained?

- a. Degree / Higher Degree
 b. Higher Education qualification
 c. A level or equivalent
 d. ONC / BTEC or equivalent
 e. GCSE or equivalent (at 16 years)
 f. No formal qualifications
 g. Other.....

6. What is your current occupation?

- a. Employer or manager
 b. Professional workers
 c. Non-manual workers
 d. Skilled/Semi-skilled manual worker
 e. Unskilled manual workers
 f. Self-employed
 g. Unemployed
 h. Homemaker / Housewife
 i. Student
 j. Other

APPENDIX E

Experiences in Close Relationships questionnaire – Revised (ECR-R)

Your name _____ Relationship(s) described _____ Today's date _____

The statements below concern how you feel in emotionally intimate relationships. Please answer the following questions about your dating or marital partner. Using the 1 to 7 scale, after each statement, write a number to indicate how much you agree or disagree with the statement.

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

1	2	3	4	5	6	7
<i>strongly disagree</i>						<i>strongly agree</i>

1.	I'm afraid that I will lose my partner's love	
2.	I often worry that my partner will not want to stay with me.	
3.	I often worry that my partner doesn't really love me	
4.	I worry that my partner won't care about me as much as I care about them.	
5.	I often wish that my partner's feelings for me were as strong as my feelings for him or her.	
6.	I worry a lot about my relationship(s)	
7.	When my partner is out of sight, I worry that they might become interested in someone else.	
8.	When I show my feelings for my partner, I'm afraid they will not feel the same about me.	
9.	I rarely worry about my partner leaving me (R)	
10.	My partner makes me doubt myself	
11.	I do not often worry about being abandoned (R)	
12.	I find that my partner doesn't want to get as close as I would like	
13.	Sometimes my partner change their feelings about me for no apparent reason	
14.	My desire to be very close sometimes scares my partner away.	
15.	I'm afraid that once my partner gets to know me, they won't like who I really am.	
16.	It makes me mad that I don't get the affection and support I need from my partner.	
17.	I worry that I won't measure up to other people.	
18.	My partner only seems to notice me when I'm angry.	
19.	I prefer not to show my partner how I feel deep down	
20.	I feel comfortable sharing my private thoughts and feelings with my partner (R)	
21.	I find it difficult to allow myself to depend on my partner	

22.	I am very comfortable being close to my partner (R)	
23.	I don't feel comfortable opening up to my partner	
24.	I prefer not to be too close to my partner	
25.	I get uncomfortable when my partner wants to be very close.	
26.	I find it relatively easy to get close to my partner (R)	
27.	It's not difficult for me to get close to my partner (R)	
28.	I usually discuss my problems and concerns with my partner (R)	
29.	It helps to turn to my partner in times of need (R)	
30.	I tell my partner just about everything (R)	
31.	I talk things over with my partner (R)	
32.	I am nervous when my partner gets too close to me.	
33.	I feel comfortable depending on my partner (R)	
34.	I find it easy to depend on my partner (R)	
35.	It's easy for me to be affectionate with my partner (R)	
36.	My partner understands me and my needs (R)	

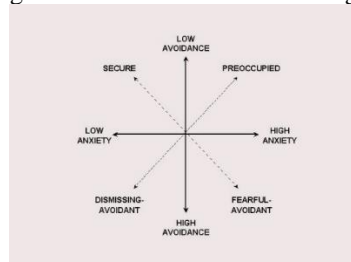
This questionnaire measures attachment related “anxiety” and “avoidance”. To score it, first reverse the answers to all statements which are followed by an (R) (e.g. statements 4, 8, 16, 17, 18, etc.). So for these statements, if an answer reads “1” score this as “7”. If it reads “2” score it as “6”, and so on. Now add all scores for the odd-numbered statements and divide this total by 18 to get an averaged score for “anxiety”. Similarly, add all scores for the even-numbered statements and divide by 18 to get an averaged score for “avoidance”. You can now transfer these averaged scores to the companion ECR-R dimensions diagram (Diagram 1) to assess whether the current picture is one of security, preoccupation, dismissal, or fearful-avoidance.

Averaged anxiety =

Averaged avoidance =

The wording used in this version of the ECR-R is deliberately fairly general, e.g. “this person/others”. If one is routinely using the scale just for, for example, romantic relationships, it’s very reasonable to change the wording so that all statements are about “my partner”. Similarly, this version of the scale has the statements ordered so that anxiety and avoidance items alternate. This is a compromise between mixing the items up a little, but still making scoring reasonably straightforward. In research studies, the items would be more thoroughly mixed.

Diagram 1: ECR-R dimensions diagram



Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item-response theory analysis of self-report measures of adult attachment. Journal of Personality and Social Psychology, 78, 350-365

APPENDIX F

Social Connectedness Scale – Revised

Directions: Following are a number of statements that reflect various ways in which we view ourselves. Rate the degree to which you agree or disagree with each statement using the following scale (1= Strongly Disagree and 6= Strongly Agree). There is no right or wrong answer. Do not speed too much time with any one statement and do not leave any unanswered

	Strongly Disagree	Mildly Disagree	Disagree	Agree	Mildly Agree	Strongly Agree
	1	2	3	4	5	6
1.					Strongly Disagree	Strongly Agree
	1	2	3	4	5	6
2.						
	1	2	3	4	5	6
*3.						
					1	2 3 4 5 6
4.						
	1	2	3	4	5	6
5.						
	1	2	3	4	5	6
*6.						
	1	2	3	4	5	6
*7.						
					1	2 3 4 5 6
8.						
	1	2	3	4	5	6
*9.						
					1	2 3 4 5 6
10.						
	1	2	3	4	5	6
*11						
	1	2	3	4	5	6
12						
	1	2	3	4	5	6
*13						
	1	2	3	4	5	6
14						
	1	2	3	4	5	6
*15						
					1	2 3 4 5
6						
16						
	1	2	3	4	5	6
*17						
	1	2	3	4	5	6
*18						
	1	2	3	4	5	6
19						
	1	2	3	4	5	6
*20						
					Strongly Disagree	Strongly Agree

*Reverse Score

Social connectedness scale-revised has two scoring options. The original scale consists of 8 items, and the revised item consists of 20 items

a) Original = revers score items 3,6,7,11,13,15,18,20 and sum 8 items.

Revised scale = reverse score items 3,6,7,9,11,13,15,17,18,20 and sum of 20 items.

Permission granted to use this scale by Dr Richard Lee

APPENDIX H

Participation Information SheetInformation for prospective participants.Research Title:

The relationship between perceived parenting received in childhood and self-compassion and fear of compassion: Does adult attachment and/or social connectedness mediate the relationship?

Information

Before you take part in this research study, you should read the following information. If you have any questions and are unclear about anything, for more information, you can contact the researcher on the email address below:

Melanie Watts (Study Researcher)
PhD student in Health Studies at the University of Essex
Email: mwatts@essex.ac.uk

Alternatively, if you would prefer to contact one of the study supervisors, please contact:

Dr Leanne Andrews
School of Health and Human Sciences
University of Essex
Wivenhoe Park
Colchester
CO4 3SQ
Email: landre@essex.ac.uk

Dr Susan McPherson
School of Health and Human Sciences
University of Essex
Wivenhoe Park
Colchester
CO4 3SQ
Email: smcpher@essex

What is the study about?

There is much evidence that self-compassion has a strong association with mental health and well-being and a person's resilience to negative events. However, little is known about where individual differences in self-compassion originate. This study aims to look at the origins of individual differences in people's self-compassion and fear of compassion for themselves, compassion received from others and giving of compassion to others. To help understand this, the study will look at what influence parenting received in childhood has on their compassion in adulthood. The research also wants to look at the impact of how socially connected people feel and their relationships in adulthood and whether this mediates the individual differences.

Am I suitable for this study?

This study hopes to include a large number of people who are 18 years of age or over and whose English is sufficient to understand the questions in the questionnaire. Both men and women are invited to participate. If you fit these criteria, you are eligible to participate.

What if I change my mind about taking part in this study?

Participation in this study is completely voluntary, and this information sheet is to help you decide if you would like to take part. If you decide to take part and then feel you do not wish to continue at any time, you may withdraw yourself at any stage for any reason without giving an explanation for your decision.

What will participation involve?

The study will consist of one online survey. It consists of 148 questions and will take approximately 30 minutes. It will involve answering questions about yourself, your memories of growing up and how you feel about your adult relationships. After the completion of the online survey, there is nothing more you need to do. But if you wish to know the findings of the study after it has been completed they can be sent via email.

What are the possible benefits of taking part?

The information you provide will be a valuable contribution in helping us understand the individual differences in self-compassion. This, in turn, will contribute to the literature that will help in the understanding of why some people have lower self-compassion than others with ways in which to improve their self-compassion and in-turn potentially improve mental health and well-being.

Will my participation in this study be kept confidential?

The information you provide will be strictly confidential, and you will not be personally identified in any of the study results or reports. The only person with direct access to your information will be the study researcher to whom you will not be personally identifiable. If an email address is provided it will only be used to contact those who wish to know the outcome of the research.

What will happen with the results in the study?

The results of this study will be included in a doctoral thesis that will be submitted to the University of Essex by the study researcher. These results may also be written up for a publication in an academic journal or presented at a conference. You will not be identified in this or any other report resulting from the study.

What should I do now?

If you wish to take part: Please give your consent and fill in the study's online survey.

If you do not wish to take part: Thank you for taking the time to read this information sheet. There is nothing more for you to do, and you can exit by closing your internet browser to end this session.

If you feel there is someone you know who may be interested in participating, please feel free to pass on the link to the survey.

Thank you for taking the time to read this information sheet.

APPENDIX I

Consent form

Consent Form with Eligibility Criteria

Before you proceed with the survey, please confirm your eligibility and your consent to participate in the study. This is to establish you have read and understood the study's information page, that you are willing to take part in the study and that you meet the criteria to participate in the study. Thank you.

Confirming Eligibility and Consent to participate.

1. I have read and understood the information provided on the study participation information page.
2. I understand that all the data collected will be anonymous and will be kept securely.
3. I understand if I provide an email address, it will be kept separate from my questionnaire so that it is not possible to identify me from my responses.
4. I understand that my participation is voluntary, and I have the right to withdraw from the study at any time during the survey without giving any reasons.
5. I understand that once I have submitted my survey, that due to the data being anonymised I will not be able to withdraw my answers.
6. I agree that I am 18 years or older.

I have read the eligibility and consent form and agree to all items.

I agree

It is important that only those who are eligible, participate in the study. If you do not meet the eligibility criteria and are unable to consent, unfortunately, you are unable to participate in this study. Please close the internet browser to end this session. Thank you for your time.

APPENDIX J

Debrief Page

Thank you for agreeing to take part in this research study and taking the time to complete the questionnaire. If you require further information or have any questions about any aspect of the study, please feel free to contact the study researcher on the email address below:

Melanie Watts (Study Researcher)
PhD student in Health Studies at the University of Essex
Email: mwatts@essex.ac.uk

Alternatively, if you would prefer to contact one of the study supervisors, please contact:

Dr Leanne Andrews
School of Health and Human Sciences
University of Essex
Wivenhoe Park
Colchester
CO4 3SQ
Email: landre@essex.ac.uk

Dr Susan McPherson
School of Health and Human Sciences
University of Essex
Wivenhoe Park
Colchester
CO4 3SQ
Email: smcpher@essex.ac.uk

Accessing Further Support

If you feel you have been affected by any of the questions in the questionnaire and would like to contact someone to discuss how you feel or the access of support services, please contact your GP or another health professional. Alternatively, you can contact the organisations below for more information and support, and contact details can be found on their websites:

UK Organisations:
Samaritans – 24-hour support
Helpline: 116 123 (UK) 116 123 (ROI)
Email: jo@samaritans.org
Website: www.samaritans.org

Relate – The Relationship People
Helpline: 0300 100 1234
Website: www.relate.org.uk

Mind – Provide support and help for anyone experiencing a mental health problems.
Call: 0300 123 3393
Text: 86463
Website: www.mind.org.uk

Resident outside the UK:
Befrienders Worldwide
Helpline for individual countries: <https://www.befrienders.org/contact-us-1>
Email: info@befrienders.org
Website: <https://www.befrienders.org/>

Thank you for taking the time completing the survey.

APPENDIX K

Histogram & Q-Q Plot Graphs for The Self-Compassion Scale

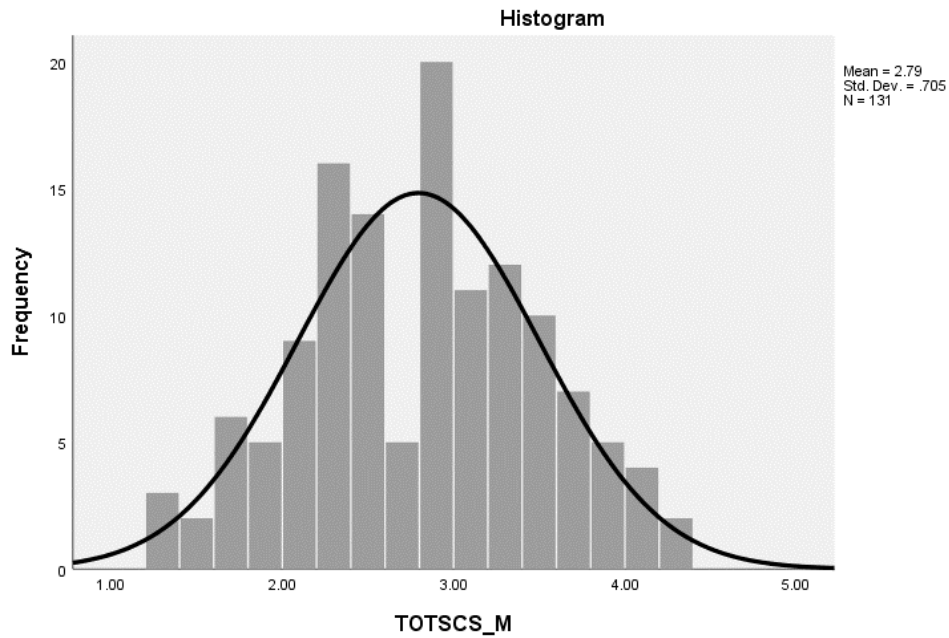


Figure 1: Histogram for the total score for the Self-Compassion Scale

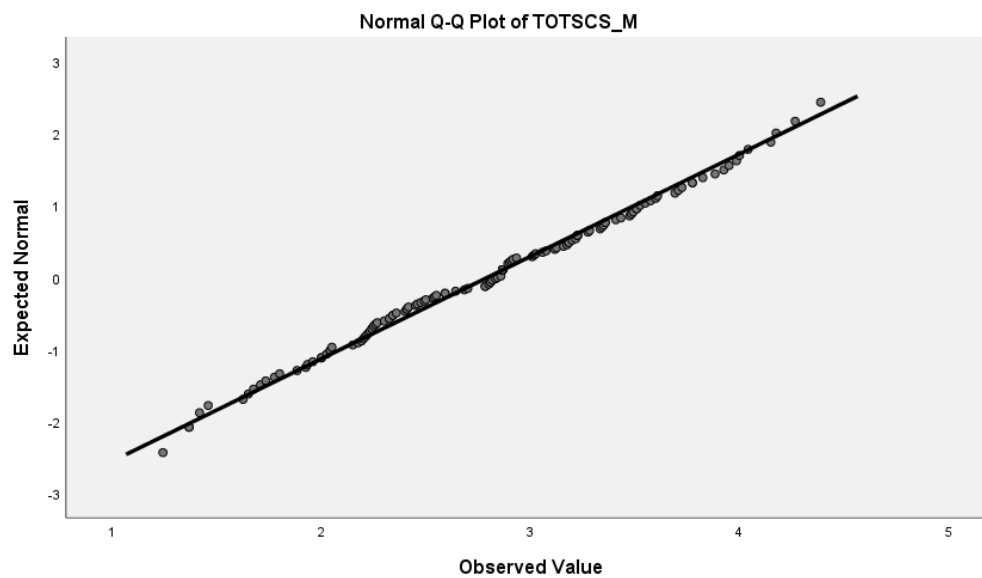


Figure 2: Q-Q Plot for the Self-compassion Scale

APPENDIX L

Histogram and Q-Q Plot Graphs for Father Rejection

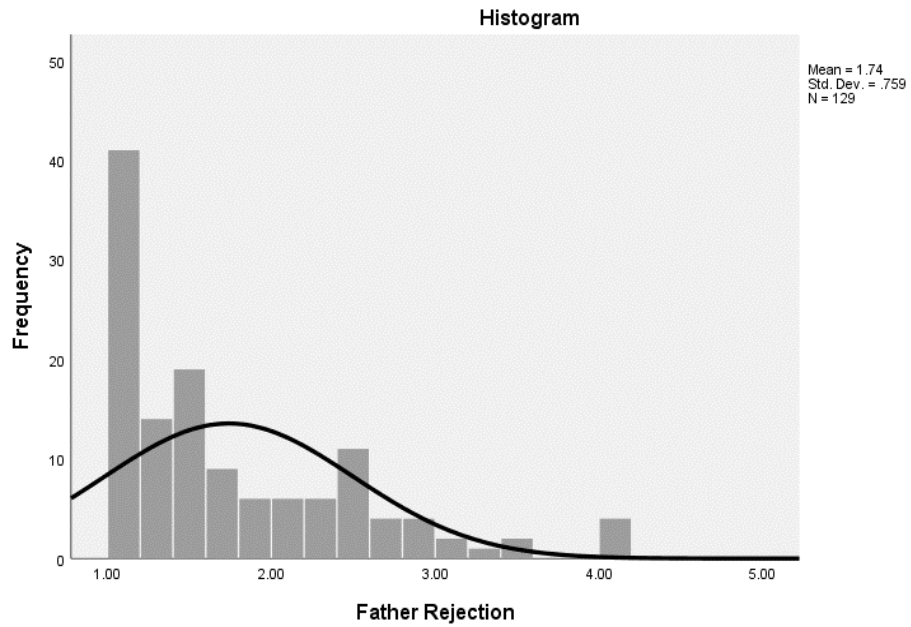


Figure 1: Histogram for Father Rejection

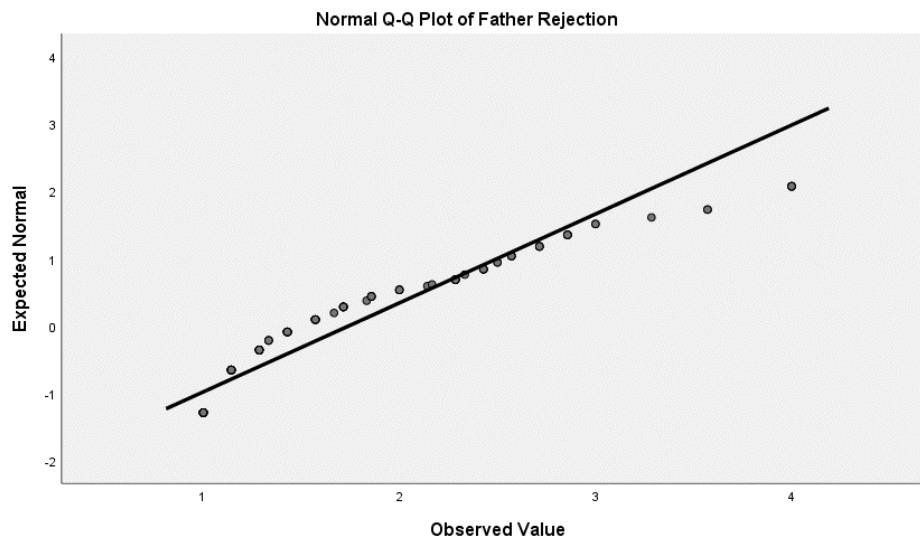


Figure 2: Q-Q Plot for Father Rejection

APPENDIX M

Histogram and Q-Q Plot Graphs for Attachment Anxiety

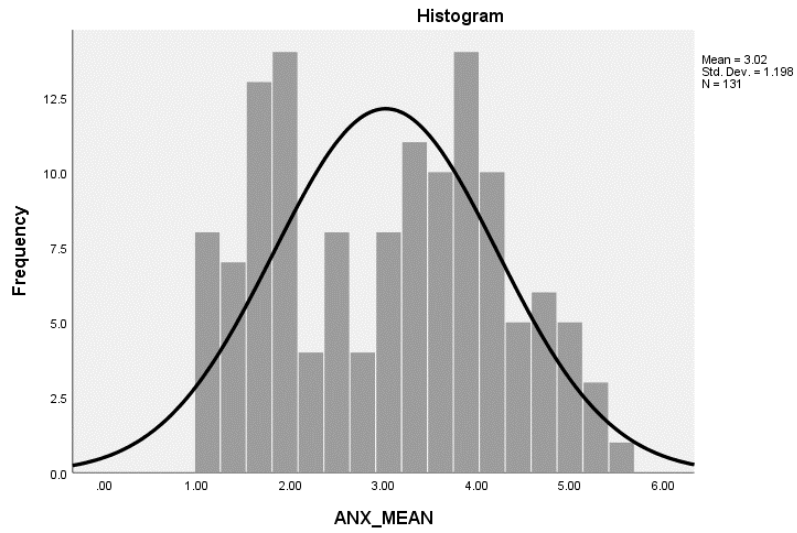


Figure 1: Histogram for Attachment Anxiety

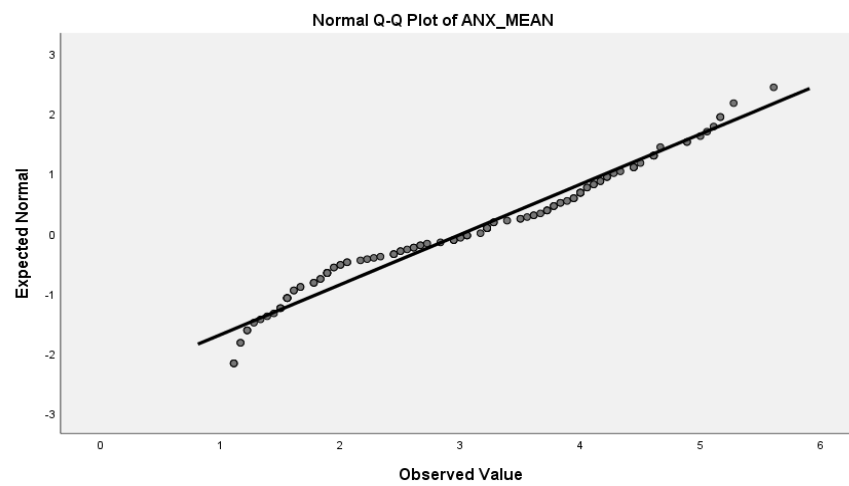


Figure 2: Q-Q Plot for Attachment Anxiety

APPENDIX N

Histogram and Q-Q Plot Graphs for Attachment Anxiety

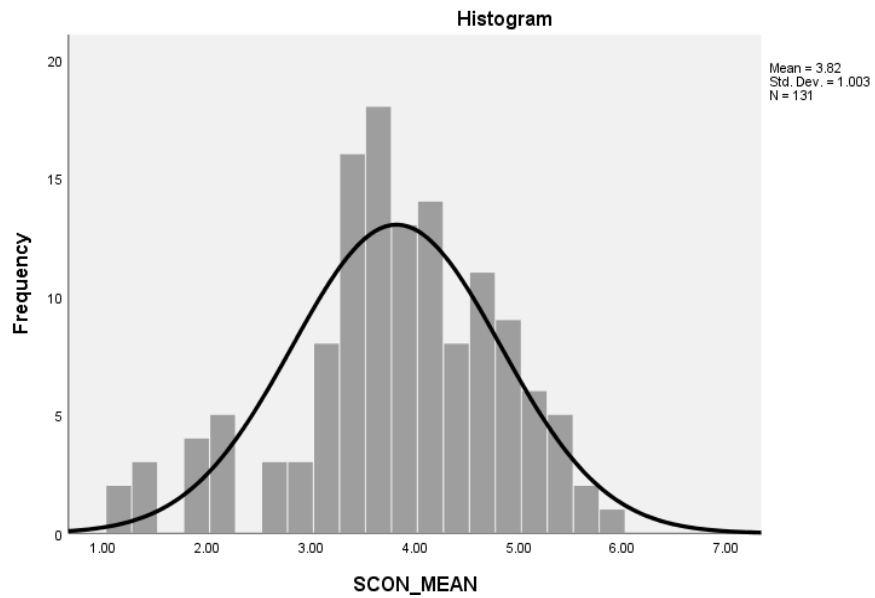


Figure 1: Histogram for Social Connectedness

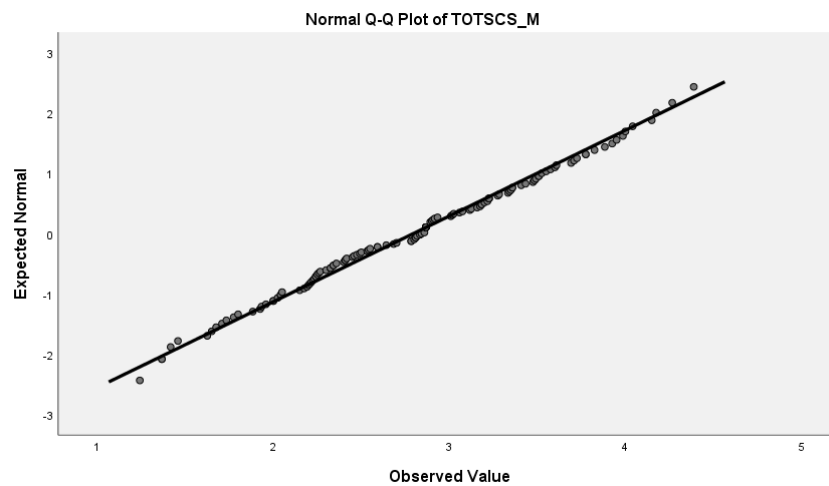


Figure 2 : Q-Q Plot for Social Connectedness

- and drain my emotional resources
7. People need to help themselves rather than waiting for others to help them 0 1 2 3 4
8. I fear that if I am compassionate, some people will become too dependent upon me 0 1 2 3 4
9. Being too compassionate makes people soft and easy to take advantage of 0 1 2 3 4
10. For some people, I think discipline and proper punishments are more helpful than being compassionate to them 0 1 2 3 4

Scale 2: Responding to the expression of compassion from others

1. Wanting others to be kind to oneself is a weakness 0 1 2 3 4
2. I fear that when I need people to be kind and understanding they won't be 0 1 2 3 4
3. I'm fearful of becoming dependent on the care from others because they might not always be available or willing to give it 0 1 2 3 4
4. I often wonder whether displays of warmth and kindness from others are genuine 0 1 2 3 4
5. Feelings of kindness from others are somehow frightening 0 1 2 3 4
6. When people are kind and compassionate towards me I feel anxious or Embarrassed 0 1 2 3 4
7. If people are friendly and kind I worry they will find out something bad about me that will change their mind 0 1 2 3 4
8. I worry that people are only kind and compassionate if they want something from me 0 1 2 3 4
9. When people are kind and compassionate towards me I feel empty and sad 0 1 2 3 4
10. If people are kind I feel they are getting too close 0 1 2 3 4
11. Even though other people are kind to me, I have rarely felt warmth from my relationships with others 0 1 2 3 4
12. I try to keep my distance from others even if I know they are kind 0 1 2 3 4
13. If I think someone is being kind and caring towards me, I 'put up a barrier' 0 1 2 3 4

Scale 3: Expressing kindness and compassion towards yourself

- | | |
|---|-----------|
| 1. I feel that I don't deserve to be kind and forgiving to myself | 0 1 2 3 4 |
| 2. If I really think about being kind and gentle with myself it makes me sad | 0 1 2 3 4 |
| 3. Getting on in life is about being tough rather than compassionate | 0 1 2 3 4 |
| 4. I would rather not know what being 'kind and compassionate to myself' feels like | 0 1 2 3 4 |
| 5. When I try and feel kind and warm to myself I just feel kind of empty | 0 1 2 3 4 |
| 6. I fear that if I start to feel compassion and warmth for myself, I will feel overcome with a sense of loss/grief | 0 1 2 3 4 |
| 7. I fear that if I become kinder and less self-critical to myself then my standards will drop | 0 1 2 3 4 |
| 8. I fear that if I am more self compassionate I will become a weak person | 0 1 2 3 4 |
| 9. I have never felt compassion for myself, so I would not know where to begin to develop these feelings | 0 1 2 3 4 |
| 10. I worry that if I start to develop compassion for myself I will become dependent on it | 0 1 2 3 4 |
| 11. I fear that if I become too compassionate to myself I will lose my self-criticism and my flaws will show | 0 1 2 3 4 |
| 12. I fear that if I develop compassion for myself, I will become someone I do not want to be | 0 1 2 3 4 |
| 13. I fear that if I become too compassionate to myself others will reject me | 0 1 2 3 4 |
| 14. I find it easier to be critical towards myself rather than compassionate | 0 1 2 3 4 |
| 15. I fear that if I am too compassionate towards myself, bad things will happen | 0 1 2 3 4 |

APPENDIX P

Demographic Information Questionnaire for the Intervention Study

1. What is your age? _____
2. What is your gender
 - a. Male
 - b. Female
 - c. Other
 - d. Prefer not to say
3. What is your marital status?
 - a. Single /Never married
 - b. Married
 - c. Living with partner
 - d. Separated / Divorced
 - e. Widowed
 - f. Civil Partnership
4. What is your ethnic group? (Choose one section and tick appropriate box)
 - a. White
 - i. British
 - ii. Irish
 - iii. Any other White background, please state _____
 - b. Black or Black British
 - i. Caribbean
 - ii. African
 - iii. Any other Black background, please state _____
 - c. Mixed
 - i. White and Black Caribbean
 - ii. White and Black African
 - iii. White and Asian
 - iv. Any other Mixed background, please state _____
 - d. Asian or Asian British
 - i. Indian
 - ii. Pakistani
 - iii. Bangladeshi
 - iv. Any other Asian background, please state _____
 - e. Chinese or Other ethnic group
 - i. Chinese
 - ii. Other Ethnicity (please state) _____
5. In which country do you currently live? (Please state) _____
6. What is the highest level of education qualification you have obtained?
 - a. Degree / Higher Degree
 - b. Higher Education qualification
 - c. A level or equivalent
 - d. ONC / BTEC or equivalent
 - e. GCSE or equivalent (at 16 years)
 - f. No formal qualifications
 - g. Other.....
7. What is your current occupation?
 - a. Employer or manager
 - b. Professional workers
 - c. Non-manual workers
 - d. Skilled/Semi-skilled manual worker
 - e. Unskilled manual workers
 - f. Self-employed
8. How many days did you listen to the compassion audio during the 2 weeks? _____ days
9. How long on average, did you listen to the compassion audio each day during the 2 weeks? _____ minutes.

APPENDIX Q

Participation Information Sheet

Information for prospective participants.

Research Title:

Exploring the increase of compassion by practicing compassion focussed imagery exercises.

Information

Before you take part in this research study you should read the following information. If you have any questions and are unclear about anything, for more information you can contact the researcher on the email address below:

Melanie Watts (Study Researcher)
PhD student in Health Studies at the University of Essex
Email: mwatts@essex.ac.uk

Alternatively, if you would prefer to contact one of the study supervisors, please contact:

Dr Leanne Andrews
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What is the study about?

There is much evidence that self-compassion has a strong association with mental health and well-being and a person's resilience to negative events. However, little is known about where individual differences in self-compassion originate. This study aims to look at the origins of individual differences in people's compassion for themselves, compassion received from others and giving of compassion to others. To help understand this, the study will look at what influence parenting received in childhood has on their compassion in adulthood; what impact socially connected people feel; their relationships in adulthood and whether practicing compassion exercises daily can improve their compassion.

Suitable for this study?

This study hopes to include a large number of people who are 18 years of age or over and whose English is sufficient to understand the questions in the questionnaire. Both men and women are invited to participate. If you fit these criteria you are eligible to participate.

What if I change my mind about taking part in this study?

Participation in this study is completely voluntary and this information sheet is to help you decide if you would like to take part. If you decide to take part and then feel you do not wish to continue at any time you may withdraw yourself at any stage for any reason without giving an explanation for your decision. If you have submitted the data and change your mind you can contact the researcher asking for the withdrawal of your responses by supplying the email previously given.

What will participation involve?

The study will consist of two parts. The first part will consist of taking an online questionnaire consisting 147 questions and will take approximately 25 minutes. You will be provided with a link to an audio file to listen to once daily for 2 weeks. The second part of the study will consist of a second link being sent to you to repeat the online questionnaire of 149 questions with one additional question (appendix a) and will take approximately 25 minutes. At the end of the second survey you will be invited to take part in an interview that will ask questions about the survey. The interview can be conducted as face to face, via telephone or video chat. All interviews will be audio recorded for research accuracy and transcription after the interview. If you do not wish to participate in the interviews, then after the completion of the online survey there is nothing more you need to do. If you wish to know the findings of the study after it has been completed they can be sent via email.

What are the possible benefits of taking part?

The information you provide will be a valuable contribution in helping us understand the individual differences in compassion. This in turn will contribute to the literature that will help in the understanding of why some people have lower compassion than others with ways in which to improve their self-compassion and in-turn potentially improve mental health and well-being. Those who complete the two week intervention will receive a £10 Amazon gift voucher when they return their post intervention questionnaires. Those who volunteer to complete the interview phase will receive a further £10 Amazon gift voucher.

Will my participation in this study be kept confidential?

The information you provide will be strictly confidential and you will not be personally identified in any of the study results or reports. The only person with direct access to your information will be the study researcher to whom you will not be personally identifiable. The email provided will only be used to contact you for the second part of the study and for those who wish to know the outcome of the research where requested.

APPENDIX R

Compassion-Focused Audio Invention

The link below is where you can access the guided pre-recorded compassion audio file “Building the compassionate self”. The audio file is freely available from the Compassionate Mind Foundation by Paul Gilbert. The duration of the recording is 13 minutes and 7 seconds.

Please listen to the audio file daily for 14 days. If this is not possible, please try to listen to the audio file for as many days as possible over the 14 days.

CLICK HERE to access the audio file.

For easiness of use, it is advisable to bookmark or save the link to be able to access the audio file daily.

APPENDIX S

Summary of results for the Intervention Study

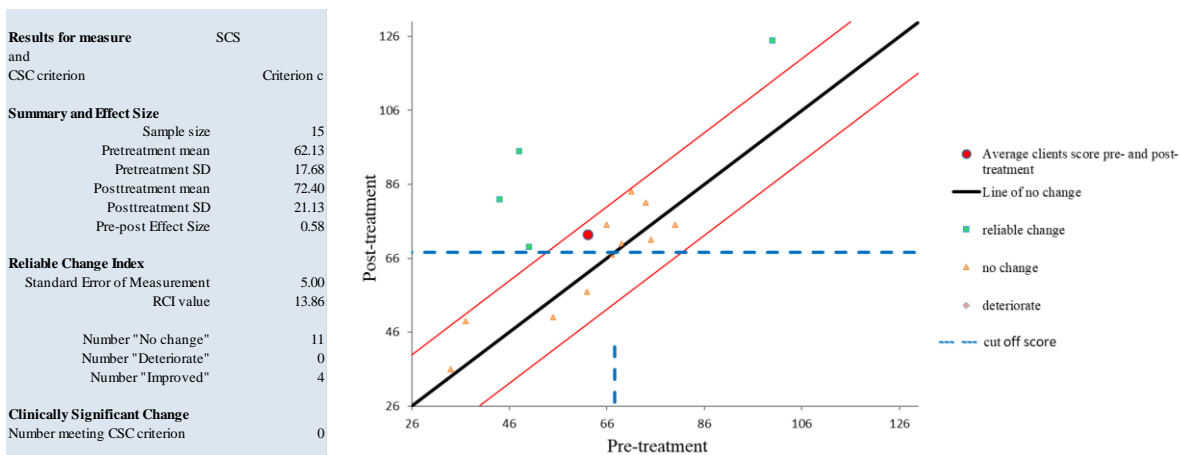


Figure 1. Scatterplot of Pre- and Post-Treatment scores showing reliable and clinically significant change criteria for SCS.

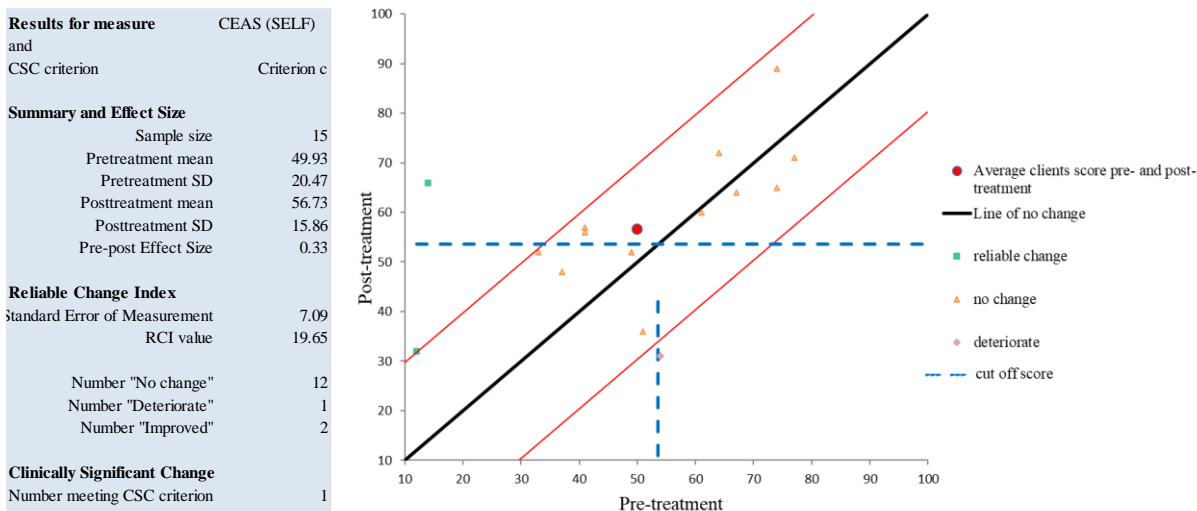


Figure 2. Scatterplot of Pre- and Post-Treatment scores showing reliable and clinically significant change criteria for CEAS (Compassion for self).

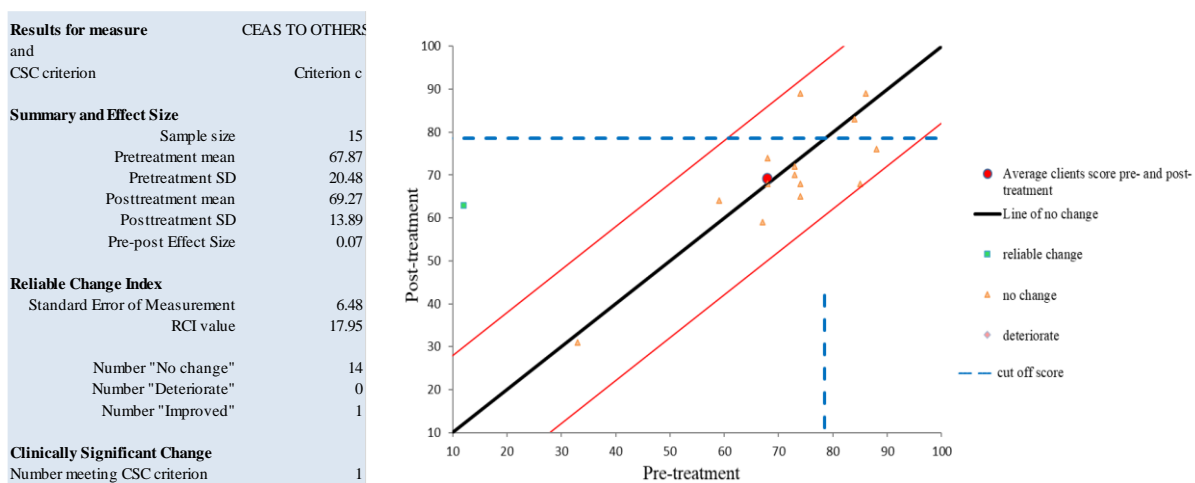


Figure 3. Scatterplot of Pre- and Post-Treatment scores showing reliable and clinically significant change criteria for CEAS (Compassion for others).

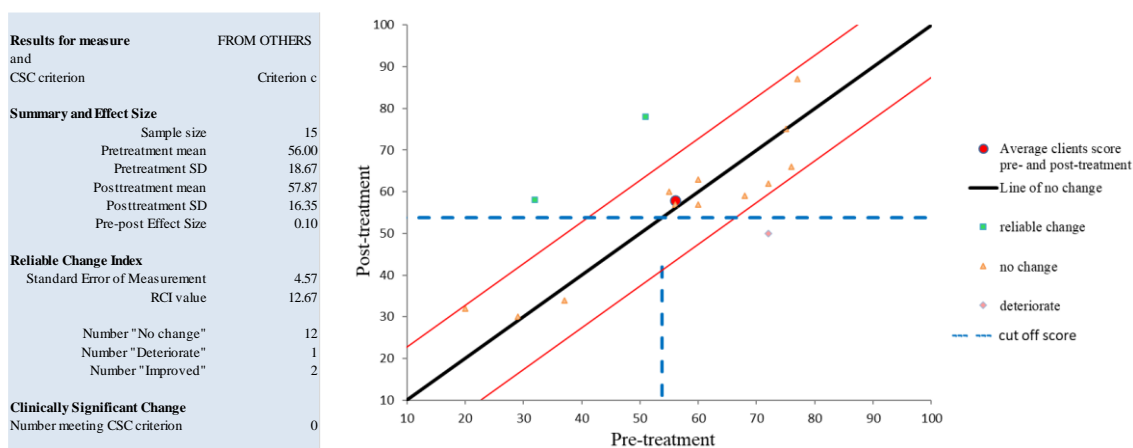


Figure 4. Scatterplot of Pre- and Post-Treatment scores showing reliable and clinically significant change criteria for CEAS (Compassion from Others).

APPENDIX T

Demographic Characteristics of the Participants

ID	Age	Gender	Marital Status	Ethnic Group	Country	Education	Occupation
1	24	Female	Single / Never married	White British	England	Degree/ Higher Degree	Self-employed
2	24	Female	Single / Never married	White British	England	Degree/ Higher Degree	Professional worker
3	52	Male	Married	White British	England	Higher Education Qualification	Student
4	22	Male	Living with a partner	White British	England	ONC/BTEC or equivalent	Student
5	28	Male	Married	White British	UK	Degree/ Higher Degree	Professional worker
6	23	Male	Single / Never married	White British	England	Degree/ Higher Degree	Professional worker
7	52	Female	Separated / Divorced	White British	England	Degree/ Higher Degree	Professional worker
8	48	Female	Married	White British	England	Degree/ Higher Degree	Student
9	21	Female	Single / Never married	White British	England	A level or Equivalent	Student
10	21	Female	Single / Never married	White British	England	A level or Equivalent	Student
11	52	Male	Married	White British	England	Higher Education Qualification	Student
12	22	Male	Single / Never married	White British	England	Higher Education Qualification	Student
13	32	Female	Married	White British	UK	Degree/ Higher Degree	Professional worker
14	31	Female	Single / Never married	White British	England	Degree/ Higher Degree	Professional worker
15	20	Male	Single / Never married	White British	England	ONC/BTEC or equivalent	Unemployed

APPENDIX U

The average scores for participants pre- and post- intervention

Table 7.1. The average scores for each of the measures pre and post intervention

ID	SCS		CEAS				SEMBU												ECR-R				SCON					
	SCS		CEAS SELF		CEAS FROM		CEAS TO		PAT REJ		MAT REJ		PAT EW		MAT EW		PAT OV		MAT OV		ATT ANX		ATT AV		SCON			
	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST	PRE	POST		
1	L	H*	L	H	L	H*	H	H	L	H	L	H	L	H	L	H	L	H	L	H	L	L	L	L	L	H	H	
2	L	L	L	H	H	H	H	H	L	H	L	H	H	H	H	L	H	L	H	L	H	L	L	L	L	L	H	H
3	L	H*	L	H*	L	H*	L	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
4	L	L	H	L	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
5	L	H	H	H	H	L	H	H	L	H	L	H	H	H	H	L	H	L	H	L	H	L	L	L	L	L	L	L
6	L	L	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
7	H	H*	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H
8	L	L	L	L	L	L	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
9	H	L	L	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
10	L	L	L	L	L	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
11	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
12	L	L	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
13	L	H	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
14	L	L*	L	H	L	L	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
15	L	L	H	H	H	H	H	H	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	H

* Reliable Change Improvement † Reliable Change Deterioration
L=Low H=High

Cut-Off scores: SCS = LOW: <3.0 HIGH: >3.0
CEAS = LOW: <5.5 HIGH: >5.5
SEMBU = LOW: <2.5 HIGH: >2.5
ECR-R = LOW: <4.0 HIGH: >4.0
SCON = LOW: <3.5 HIGH: >3.5