

The Relational Cost of Being Invalidated: Childhood Emotional Environments and Adult
Interpersonal Wellbeing.

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3.

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Abstract

The general impact childhood experiences with caregivers have on the self, emotion and interpersonal relationships has been studied widely. One such experience is growing up in an invalidating childhood environment, whereby a parent criticises, trivialises and punishes their child for expressing their thoughts and feelings (Linehan, 1993). Further research has shown how experiencing an invalidating childhood environment can have a negative effect on the self (e.g., Harter, 1999) and emotion (e.g., Lambie & Lindberg, 2016), that then leads into adult life (e.g., Westphal, Leahy, Pala & Wupperman, 2016). Research on the consequences of this experience on adult interpersonal relationships is limited, with existing literature demonstrating that emotional invalidation is associated with dysfunction and difficulties (Selby et al., 2008; Gonçalves, et al., 2020). Engaging in prosocial behaviours is an important aspect of a long, satisfying relationship (e.g., Worthington, 1998), however there are instances whereby people do not (e.g., low self-esteem; Smith & Reis, 2012). The overall aim of this thesis was to gain a clearer understanding of how invalidating childhood environments impacts relational processes in adulthood, specifically engagement in relationship maintenance behaviours. Across four empirical chapters, I explored and provide support for individuals with a history of emotional invalidation propensity to engage in forgiveness, share positive news and perceive or express gratitude with a close other (i.e., romantic partner or best friend). Overall, the contribution this will make to the field will be to highlight how an invalidating childhood environment influences relationship processes (i.e., prosocial outcomes) and consequently offer support for relationships both preventatively (i.e., teaching parents validating responses to their children's) and as intervention (i.e., couples therapy).

Chapter 1: General Introduction

Emotional experiences in upbringing

Childhood experiences within families and their outcomes have been explored for decades across different disciplines, with extensive literature showing how these environments are crucial in shaping socioemotional development in childhood (e.g., Keller, 2018). Ultimately, our family environment can influence how we view ourselves (e.g., self-esteem; Krauss, Orth & Robins, 2020) and handle emotions (e.g., emotion regulation; Morris et al., 2007) in childhood. Concepts such as parenting style and family functioning have been shown to influence children's emotional processing (Pozzi et al., 2020), social development (Mensah & Kuranchie, 2013) and mental health (Nikolaev, Baranova & Petunova, 2016). In contrast, more negative experiences such as family conflict and dysfunctional families have been associated with emotional and behavioural problems (Dutra Cipriano Lara, et al., 2022), lower self-concept (Raschke & Raschke, 1979) and more anxiety (Vladimirovna, 2013). Extremes in emotional experiences such as emotional maltreatment, adverse childhood experiences, and emotional abuse have been linked to emotion dysregulation (Burns, Jackson & Harding, 2010) and consequently psychopathology (Schlensog-Schuster et al., 2024). Overall, both positive and negative experiences in childhood have a strong influence on childhood development and significant outcomes for children that then may shape later life, with negative experiences seemingly having a more detrimental effect.

Parents and caregivers specifically provide the base in which we learn how to respond to emotional situations and how to react to them (Denham, 2007; Miller, Kliewer & Partch, 2010). This is not achieved just through observation of caregivers (Denham, 2007) but also learned from interactions with parents on how to regulate emotions and how to better understand them (Cole, Martin, & Dennis, 2004). Specifically, research has shown parent's reactions to their child's emotions, also known as socialisation of emotion, is key in

children's long-term socioemotional development. Socialisation of emotion refers to when caregivers instil their perspectives regarding the expression and experience of emotion, which shapes the emotional processing and regulation of their children (Eisenberg, Cumberland & Spinrad, 1998). This can be direct (e.g., interactions) or indirect (e.g., family emotional environment) from a parent or caregiver (Morris et al., 2007)

Emotion socialisation can occur for both positive and negative emotions, which have shown to have differing outcomes. For example, it has been shown that parents using positive and supportive emotion socialisation (e.g., encouraging positive emotions) is associated with positive expressivity in their children (Denham, Cook & Zoller, 1992) and regulation (Cao et al., 2025). In contrast, children who receive negative emotion socialisation (e.g., dismissal of positive or negative emotion) are more likely to become dysregulated (Eisenberg, Fabes, & Murphy, 1996), have increased negative affect (Fabes, Poulin, Eisenberg, & Madden-Derdich, 2002) and exhibit increased distress (Scaramella & Leve, 2004). The effects of negative socialisation of emotion are evident beyond childhood (e.g., in adolescence), with teenagers reporting more depressive symptoms if their mothers stifled their positive affect (Yap, Allen, & Ladouceur, 2008) and more anger regulation (Hale & Zeman, 2023).

Overall, it is clear the impact that parents have on their children's emotions, either directly (i.e., emotion socialisation) or indirectly (i.e., family functioning). With literature supporting that negative experiences in childhood leading to more emotion dysregulation, I wanted to explore a particular concept that has been known to have shown to have detrimental effects: emotional invalidation in childhood.

The consequences of emotional invalidation

One negative emotional experience that some children have growing up is emotional invalidation from caregivers. Emotional invalidation refers to “experiences of repeated

criticism, trivialisation and punishment for attempting to communicate their internal thought and feelings” (Linehan, 1993) and consequently undermines a child’s real emotional experience or expression by making them feel like it is inaccurate or false (Musser et al., 2018). This could include things like telling them “you’re not sad, you’re fine” or “don’t be too happy as you’ll just get disappointed”, thus contradicting their felt or stated emotion.

Emotionally invalidating environments are one aspect of a wider model, the Biosocial Model (Linehan, 1993), which has been used to explain the onset, development and prevalence of borderline personality disorder (BPD). There are two main risk factors that are described in the theory: invalidating environments and emotional vulnerability which both in turn lead to overall emotion dysregulation evident in BPD. As previously stated, an invalidating environment is characterised as trivialisation, dismissal and punishment by one’s caregivers during childhood when expressing emotions. In contrast, emotional vulnerability is characterised as being predisposed to having intense and reactive emotional states, with the interaction between both risk factors causing emotion dysregulation, commonly associated with borderline personality disorder traits.

Studies have empirically supported this theory (Sauer & Baer, 2010; Sturrock & Mellor, 2014). Specifically, the theory posits that those that grow up in an invalidating childhood environment also have issues with affect, self-identity and interpersonal difficulties, as characterised by BPD (Linehan, 1993) and is supported by empirical research (Lombardo, Waters & Elzy, 2023; Stepp et al., 2012). Invalidating childhood environments are typically measured using the Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007), a self-report measure created to retrospectively report caregivers’ reactions to emotions up to the age of eighteen. The items of this measure were created based on the clinical experience of Linehan (1993) and the Biosocial Theory and accurately captures the emotional element of being invalidated, directly quoting different emotions such

as anxiety and anger in the scale. Previous research on this topic has predominantly been in a clinical context, with emotional invalidation in childhood being associated with clinical outcomes in adulthood such as Borderline Personality Disorder (Crowell, Beauchaine & Linehan, 2009; from which the concept is based on), anorexia and disordered eating (Haslam, Mountford, Meyer & Waller, 2008; Hughes-Scalise & Connell, 2014; Ford, Waller & Mountford, 2011), major depressive disorder (Westphal et al., 2016) and non-suicidal self-injury (Guérin-Marion et al., 2020; Perez, Lorca & Marco, 2020).

In recent years, some of the assumptions of the Biosocial Theory have started moving beyond just clinical implications (e.g., Huxley & Bizumic, 2017), with increasing recognition that the proposed role of invalidating environments in shaping general emotional and interpersonal functioning may also be relevant to non-clinical populations. The present thesis builds on the broader application of the Biosocial Model by examining whether experiences of emotional invalidation are associated with emotional and interpersonal outcomes in non-clinical populations. In particular, it aims to highlight that invalidating environments could contribute to difficulties in understanding, regulating, and responding to emotions, which may have relevance beyond the development of psychopathology (e.g., BPD and disordered eating), as previous research has primarily focused on clinical outcomes. This theoretical perspective has informed the development of this body of work. Rather than applying the Biosocial Theory solely as a framework for understanding psychopathology, this thesis applies its underlying assumptions to the study of broader emotional and interpersonal functioning in the general population.

In contrast to invalidation, it is important to consider what being validated by caregivers has shown and why that is important, with the literature showing that validation and acceptance of emotion can lead to many positive outcomes for children (e.g., Lambie, Lambie & Sadek, 2020). Children who have parents who respond or react in a supportive

manner are more likely to have better emotional awareness (Eisenberg, Fabes, & Murphy, 1996; Lambie & Lindberg, 2016) and emotion regulation (Lunkenheimer, Shields, & Cortina, 2007). Consequently, this can contribute to children fostering more supportive relationships and promotes better help seeking behaviours (Kim et al., 2026), with experiences of emotional validation transferring to contexts outside of the family environment (e.g., schools; Jeon & Park, 2024).

As expected, emotional invalidation has been linked with negative outcomes for children regarding their own emotions (i.e., less emotional awareness; Lambie & Lindberg, 2016). This results in children having to learn to self-invalidate their emotions because they are not allowed to express them and results in feeling alienated from their feelings (Rogers, 1959). Additionally, they learn that they are unable to trust their emotions (Eisenberg et al., 1998), that they are wrong (Linehan, 1993) and learn dysfunctional behaviours in order to cope as they feel like they cannot ask for support (Fruzzetti et al., 2005). In terms of direct outcomes, research has found that being emotionally invalidated in childhood can lead to a more critical attitude and negative perception of themselves (Harter, 1999), low quality of social functioning (Eisenberg et al., 1999) and consequently predicts children's mental health issues (Wang et al., 2025).

Furthermore, the effects of emotional invalidation from parents and caregivers transcends childhood into adolescence, with it being linked to less fulfilling disclosures to their caregivers (Martin, Kim & Freyd, 2018) and overall internalising and externalising symptoms (Buckholdt, Parra & Jobe-Shields, 2014). From either one or both parental figures, emotional invalidation can lead to depression, anxiety and difficulties in emotion regulation (Williams, 2010; Payne, 2025), perfectionism and affective distress (Welch, Brott & Veilleux, 2025) and defiance and anger in adolescence (Crowell et al., 2013). Growing up in an emotionally invalidating environment has detrimental outcomes during critical periods in

early childhood, thus significantly impacting socioemotional development and consequently creating long-term issues for individuals who have this experience.

These negative consequences of emotional invalidation persist beyond childhood and into adulthood and is of particular interest in this thesis. In a clinical context, beyond the previously cited literature on the direct effects of an invalidating childhood on psychopathology (e.g., disordered eating behaviour; Haslam, Mountford, Meyer & Waller, 2008), there are other emotional, self-oriented and social outcomes, either shown to be indirectly related or as part of an exploration of specific processes in the clinical population. Firstly, emotional invalidation in childhood has been associated with many negative emotional processes in a clinical context (i.e., primarily BPD or BPD symptomology) such as difficulty regulating emotions (Hope & Chapman, 2019), fear of emotion and thought suppression (Sauer & Baer, 2009), negative attitudes towards emotional expression (Haslam et al., 2012), negative beliefs about emotions (Ceylan & Koç, 2026) and maladaptive emotional functioning (Ford et al., 2011). In relation to the self, it has also been associated with more self-criticism (Naismith, Zarate Guerrero & Feigenbaum, 2019), more self-disgust (Drea, 2017), lower self-compassion (Cano et al., 2024) and fear of it (Loess, 2019). Other concepts that emotional invalidation has been related to is general and anger rumination (DeShong, Grant & Mullins-Sweatt, 2019; Sauer-Zavala, Geiger & Baer, 2013), impulsivity (Rahmati et al., 2025) and adult insecure attachment (Gonçalves et al., 2021).

In non-clinical contexts, those that experience emotional invalidation in childhood report more negative outcomes such as lower quality of life (Huxley, Seaton & Grenyer, 2021), less meaning in life (Meng et al., 2024), more psychological distress (Krause, Mendelson & Lynch, 2003; Kim, 2025) and greater mood instability (Kemežytė, 2025). Similarly, when sampling in the general population independent of clinical contexts, emotional invalidation in childhood has been associated with greater emotional reactivity

(Shenk & Fruzzetti, 2011), lower self-functioning (Huxley, Seaton & Grenyer, 2021), narcissism (Huxley & Bizumic, 2017) and more maladaptive defence mechanisms (Whitaker, 2025). As there is extensive literature on how emotionally invalidating environments can shape a person's sense of self and emotion regulation and processes, it would be fair to assume that these difficulties would be evident in interpersonal contexts.

However, there has been little literature exploring the impact of emotional invalidation in childhood on close relationship functioning in adulthood (or interpersonal outcomes). The work that has been done has mostly explored it in the context of psychopathology, with emotional invalidation contributing to interpersonal difficulties (Gonçalves, et al., 2020) and relationship dysfunction (Selby et al., 2008) in the context of disordered eating and borderline personality disorder respectively. They found specifically that emotionally invalidating environments were associated with more interpersonal difficulties, including avoiding closeness, anxiety over abandonment, as well as relationship dissatisfaction and conflict (Gonçalves, et al., 2020; Selby et al., 2008).

Over the last decade or so, there has been growing research on emotional invalidation and general relationship outcomes in non-clinical populations. Generally, research has found emotional invalidation to be linked with poor interpersonal functioning (i.e., my relationships and friendships never last long; Huxley, Seaton & Grenyer, 2021) and interpersonal dysfunction (e.g. conflict, abandonment concerns; Lombardo, Waters & Elzy, 2023). Specifically, those that were invalidated in childhood, albeit only by their fathers, reported lower intimacy in their relationship and were also more invalidating to their partner (Valdivieso, 2021). Furthermore, research has shown that childhood invalidation is associated with interpersonal problems, as characterised by sensitivity (i.e., feeling hurt by criticism) and ambivalence (i.e., difficulties with expressing affection; Nash 2012). Past experiences of being invalidated by your maternal figure has been linked with lower relationship support and

more conflict in their current romantic partner (Elzy, Keaton, Bogus & Raymond, 2024), further fuelled by current perceptions of emotional invalidation by their partner. It is clear that invalidating childhood environments have negative consequences for aspects of the self, emotion regulation and wellbeing as well as interpersonal contexts more broadly. Overall, the mechanisms involved in these concepts are relevant for the maintenance and wellbeing of close relationships.

Close relationships

A close, social relationship can be defined as “one of strong, frequent, and diverse interdependence that lasts over a considerable period of time” (Kelley et al., 1983). Rather, close relationships, including those with family, friends, and romantic partners, are often highly interdependent (Thibaut & Kelley, 1959) such that people in close relationships mutually influence each other’s outcomes for better and for worse. Recently, this has also been evident for one another’s emotional experiences (Schoebi & Randall, 2015), with theorists highlighting that an individual's emotions are dependent on their partner’s behaviour (Arriaga & Agnew, 2001; Berscheid & Ammazalorso, 2001). This is important when considering the reciprocal nature of romantic relationships, particularly in terms of how past emotional experiences can impact present day emotions, and how these processes contribute to maintaining said relationship.

Romantic relationships specifically differ from general close relationships such as friendships or acquaintances as they are characterised by affection, intimacy, passion and commitment (Collins, Welsh & Furman, 2009; Moss & Schwebel, 1993; Sternberg, 1986). Not only do we learn from our parents and caregivers how to respond to emotions and stressors (Eisenberg, Cumberland & Spinrad, 1998), but these key role models also form expectations or ideas around romantic relationships (e.g., Rhoades et al., 2012), and we learn

from them what a good relationship might look like. Additionally, how parents behave with us as we grow (e.g., attachment theory; Bowlby, 1969) also predicts later romantic relationship functioning (Simpson, Collins, Tran & Haydon, 2007).

It is no secret that they provide important benefits considering that across time and varied cultures, people have frequently formed long-term relationships (Brown, 1991). Generally, romantic relationships are associated with more positive emotions such as loving and feeling loved and companionship (Sedikides, Oliver & Campbell, 1994) as well as feeling like you have someone who supports you and to do things with (Apostolou, Christoforou & Lajunen, 2023). Theoretically, there are many different facets of a strong, long-term relationship, typically defined by characteristics such as high relationship satisfaction and commitment (e.g., Rusbult, 1980). These relationships tend to have positive outcomes for both health and wellbeing, with research showing that more established relationships have greater benefits for mental health than less committed ones (Braithwaite & Holt-Lunstad, 2017). Good relationships have been shown to promote health (Kiecolt-Glaser & Newton, 2001; Markey, Markey & Gray, 2007), fewer mental health problems (Braithwaite, Delevi & Fincham, 2010), reduction in pain (Younger et al., 2010) and greater life satisfaction (Gustavson et al., 2016). In terms of relational benefits, feeling more satisfied in your romantic relationship has been associated with less conflict (Cramer, 2000), less likelihood of breaking up (Arriaga, 2001) and more positive affect (Roth et al., 2025). This also goes beyond what is good for the relationship, but also for each other, with research showing that romantic relationships promote self-growth reciprocally (i.e., helping each other grow; Overall, Fletcher & Simpson, 2010).

Importance of relationship maintenance behaviours

Romantic relationships are known to have challenges that need to be overcome (e.g., forgiving when your feelings are hurt), or present an opportunity for connection (e.g., wanting to talk about their day; Gottman & Gottman, 2017). The integrative model of relationship maintenance alludes to either individual or interactive mechanisms that those in a romantic relationship engage in to keep these relationships going during these times (Ogolsky et al., 2017). This includes threat mitigation (e.g., forgiveness) or relationship enhancement (e.g., gratitude and capitalisation). Partaking in these prosocial behaviours in your close relationships is important for the maintenance of said relationships. Prosocial behaviours can be defined as voluntary actions that one takes that benefits their partner or the relationship such as making sacrifices (Rusbult & Agnew, 2010). But how and why do people go beyond their own interests and behave in a way that benefits their romantic partner or relationship?

I was particularly interested in how three specific prosocial behaviours that contribute to relationship maintenance—forgiveness, capitalisation and gratitude—are influenced by invalidating emotional experiences by caregivers in childhood. All three of these prosocial behaviours are known to contribute to many benefits in long-term romantic relationships, with them being linked to greater trust and harmony (Exline & Baumeister, 2000; Bemis, 2008), higher relationship satisfaction (Worthington, 1998; Braithwaite, Selby & Fincham, 2011; Gable et al., 2004; Algoe, Gable & Maisel, 2010) and intimacy and closeness (Gable, Reis, Impett & Asher 2004; Tsang, McCullough & Fincham, 2006). Overall, these are important processes to engage in for a fulfilling and satisfying relationship. It is important to understand the mechanisms underlying how we behave in our relationships. Imagine your romantic partner does something to hurt you; they don't listen to you when you tell them something important or they forget to get you something for your anniversary. There are certain factors that might contribute to forgiving your partner for these things. Specifically,

understanding how we act in negative circumstances (i.e., having to forgive someone) versus more positive circumstances (i.e., expressing we are grateful, sharing good news) is not only beneficial for ourselves but also for our partner and relationship. Individual differences in emotional processes (i.e., dysregulation) and working models of the self and others (i.e., attachment) could help explain whether someone is likely to forgive, capitalise and engage in gratitude.

First, forgiveness can be defined as a willingness to forgo destructive responses such as retaliation, resentment, and avoidance and adopt more constructive responses such as benevolence (Ehteshamzadeh et al., 2011; McCullough, 2000, 2001; McCullough et al., 1997; Rusbult et al., 1991). It has been shown to contribute to greater trust and harmony (Exline & Baumeister, 2000), relationship satisfaction and commitment (Worthington, 1998; Braithwaite, Selby & Fincham, 2011), and marital adjustment (Woodman, 1991). There are certain factors that might contribute to forgiving your partner for certain things. Specifically, the forgiveness literature has shown that dispositional forgiveness is associated with more agreeableness and emotional stability (McCullough & Hoyt, 2002; Berry et al., 2001) as well as more self-control (Ho, Liang & Van Tongeren, 2024), which consequently led to better relationship outcomes. Furthermore, it has been shown that lower emotional reactivity (Ercengiz, Safalı, & Turan, 2023) and higher self-esteem (Körner, Schütz, Zverling & Sha'ked, 2022) was associated with more forgiveness (i.e., higher benevolence, lower avoidance and vengeful motivations).

As forgiveness is an emotional process (Ho, Van Tongeren & You, 2020), those who experience this dysregulation in adulthood as a result of emotional invalidation may struggle to overcome transgressions more positively. This balance between constructive and destructive responses to transgressions means that forgiveness is heavily influenced by a person's ability to recognise and regulate their emotions (Ho, Van Tongeren & You, 2020).

Given the connection between childhood emotional invalidation and emotional regulation (e.g., emotional inhibition; emotional reactivity), emotional invalidation may also influence interpersonal behaviours, namely forgiveness.

With capitalisation, this refers to when someone discloses a positive event or news, in this case to a close other, with the hope of an enthusiastic response (Langston, 1994). This relational process has been shown to have many benefits such as increased intimacy and relational wellbeing in couples (Gable, Reis, Impett & Asher 2004). There are many instances whereby people are less likely to capitalise with their romantic partner. For example, fears of bragging (Chan, Reese & Ybarra, 2021) and higher social anxiety (Kashdan et al., 2013) were associated with lower likelihood of sharing positive news, as well as contributing to being poor recipients of capitalisation attempts. Those with low self-esteem were also more likely to perceive less responsiveness to their good news from their partner (Smith & Reis, 2012) as well as more avoidantly attached individuals (Shallcross et al., 2011), with both more anxiously and avoidantly attached partners themselves reporting less responsiveness from their partner.

Similarly to forgiveness, with capitalisation being an emotionally expressive process (Overall et al., 2020), there was reason to believe that emotional invalidation in childhood would influence this. Research has shown that when there is an anticipation of a dismissive response, individuals may down-regulate through suppression of the positive emotion (Greenaway & Kalokerinos, 2017). Furthermore, individuals who have experienced emotional invalidation may be less likely to share emotions due to fears they will not be understood, similar to their experiences in childhood (Rogers, 1959). Due to capitalisation ultimately being an emotional sharing experience, there was reason to believe emotional invalidation would disrupt the process, due to the dysregulation created from this experience.

Finally, gratitude is the emotion that derives from the recognition that a positive experience occurred because of someone else's responsive behaviour (McCullough, Emmons & Tsang, 2002; Algoe, 2012). There are many relational benefits of gratitude, with its experience being linked to relationship satisfaction (Algoe, Gable & Maisel, 2010), closeness (Murray & Hazelwood, 2011) and relationship maintenance (Gordon et al., 2012). Individual differences such as adult insecure attachment (i.e., anxiety and avoidance) were associated with less dispositional gratitude (Zhang et al., 2017) and those that were more insecurely attached found perceived less gratitude from their romantic partner (Park et al., 2019). Similarly, those with lower self-esteem were less affectionate with their romantic partner, as measured through less positive emotional and physiological reactions. Furthermore, insecurely attached individuals also believed their romantic partners would not gain benefit from it (Luerssen, Jhita & Ayduk, 2017). Furthermore, for those that had more contradictory feelings surrounding emotional expression, gratitude was seen as a beneficial way of inhibiting that (Chen, Chen & Tsai, 2012).

Gratitude is an inherently relational process, and partner's emotional experiences are known to influence their partner (Schoebi & Randall, 2015; Butler & Randall, 2013). Research has shown that when individuals experience avoidance of intimacy and anxiety over abandonment, as characterised as insecure adult attachment, they are less likely to engage in gratitude (e.g., Park et al., 2019). As gratitude is a positive emotional experience (Watkins et al, 2006) that can be reliant on feeling or communication of this positive emotion (Fredrickson, 2004), those who have histories of emotional invalidation might find daunting due to these difficulties, due to also having fears of abandonment and avoidance of intimacy (e.g., e.g., Gonçalves et al., 2021).

Thesis overview

Experiences with caregivers in childhood, particularly negative ones, has been robustly linked with dysfunction across the lifespan (e.g., Lombardo, Waters & Elzy, 2023). One facet of psychological development that has been linked to outcomes in adulthood is an invalidating childhood environment, as defined in Linehan's (1993) biosocial model. This describes experiences where primary caregivers—such as a parent—continuously criticise, ignore, or trivialise the child when they express their thoughts, emotions, and behaviours (Linehan, 1993; Sauer & Baer, 2010). The wider biosocial model proposes a biological predisposition to emotional vulnerability and an invalidating environment via caregivers can cause a dysfunctional emotional regulation system (Crowell, Beauchaine & Linehan, 2009). The present thesis builds on this broader application of the Biosocial Model by examining whether experiences of emotional invalidation are associated with emotional and interpersonal outcomes in non-clinical populations.

Research has shown that emotional invalidation has detrimental outcomes for aspects of the self (e.g., lower self-compassion; Westphal, Leahy, Pala & Wupperman, 2016) and emotional processes (e.g., difficulties with regulation; Hope & Chapman, 2019). In recent years, literature has shown that the effects of emotional invalidation impact relationship outcomes by causing dysregulation and difficulties (Lombardo, Waters & Elzy, 2023; Gonçalves, et al., 2020). However, there has been little research on how this experience in childhood could impact specific processes in romantic relationships. Consequently, there is scope for exploring whether individual differences in emotional invalidation disrupt the very well-known processes which explain how relationships function. Overall, we explored how an invalidating childhood environment affects relationship maintenance processes (i.e., prosocial behaviours), in particular engagement in forgiveness, capitalisation and gratitude. To answer this question, we have four empirical chapters with eleven studies to better

understand what role invalidation can play in interpersonal functioning and relationship maintenance processes (i.e., prosocial behaviours).

In Chapter 2, I explored if emotional invalidation was associated with forgiveness – characterised as lower benevolence and higher avoidance motivations - of a close others transgression. In all 3 studies, we tested for indirect effects of emotional inhibition, emotional reactivity and self-control when forgiving a close other (i.e., best friend or romantic partner), with a particular focus on forgiveness of infidelity in Study 1 and self-selected transgressions in Study 2 and 3. Specifically, if emotional invalidation led to emotion inhibition, people may be able to experience more benevolence towards their partner and therefore more forgiveness. By contrast, if emotional invalidation led to greater negative emotional reactivity, that would make it challenging to suppress avoidance or vengeful motivations and then people would be less forgiving.

In Chapter 3, I explored whether people who had experienced emotional invalidation in childhood shared positive news with a close other and how perceptions of someone's invalidation during childhood influenced the likelihood of sharing positive news with them. In Study 1 and 2, I tested for indirect effects of emotional reactivity and attitudes towards emotional expression when sharing positive news with a close other (best friend or romantic partner). Specifically, I predicted that if emotional invalidation led to more negative attitudes towards emotional (i.e. consequences about expressing positive emotion), people may be less likely to share positive news with a close other. Furthermore, if emotional invalidation led to greater emotional reactivity (i.e., difficulty controlling strong, intense emotions), individuals may also be less likely to share positive news with a closer other. In Study 3, I predicted that when individuals were presented with a description of someone being invalidated in childhood, they were less likely to capitalise with them. This was in comparison to people who were shown a description of someone being validated in childhood. Finally, Study 4

aimed to explore this further but in the context of a close other (i.e. romantic partner). I predicted that individuals who perceived their partner to have experienced greater emotional invalidation by their close others (e.g., parents, friends), would be less likely to capitalise with said romantic partner.

In Chapter 4, I explored how emotional invalidation in childhood could influence expressed gratitude with a romantic partner, perceptions of a partner's gratitude and the overall gratitude experience between couples. In Study 1 and 2, I explored the indirect effects of adult insecure attachment (i.e., avoidance and anxiety), and whether this better explained the potential association between emotional invalidation and gratitude. More specifically, I explored whether it impacted self-reported felt gratitude and expressed gratitude, both for themselves and their perceptions of their partner. In Study 3, adopting Actor Partner Interdependence Model (APIM; Kenny et al., 2006), I explored the dyadic consequences of emotional invalidation on expression of gratitude. I hypothesised actor effects of emotional invalidation on expression of gratitude such that greater emotional invalidation in childhood will be negatively associated when expressing gratitude about a romantic partner. Additionally, I predicted partner effects, such that greater emotional invalidation will be associated with more negative expressions of gratitude from a romantic partner.

In Chapter 5, I explored the dyadic consequences experiencing an invalidating childhood environment has on both romantic partners by examining cardiovascular responses (i.e., challenge or threat) to capitalisation and their evaluations of the discussion. I predicted actor effects of emotional invalidation on threat responses such that own emotional invalidation in childhood will be positively associated with own cardiovascular threat (i.e., maladaptive response) when capitalising with a romantic partner, as well as with partner's cardiovascular threat. Furthermore, I predicted actor and partner effects of emotional invalidation predicting perceived discussion success, such that own emotional invalidation

will be associated with more negative evaluations about how responsive they believed their partner was during the discussion, as well as partners evaluations of the discussion.

Across each chapter, several potential mediators were examined to explore mechanisms through which emotional invalidation in childhood may be associated with each relationship maintenance process. The mediators differed across studies because they were selected based on their theoretical relevance to the interpersonal process examined in each chapter.

Emotional inhibition, defined as the tendency to suppress or control emotions, was examined in Chapter 2. Experiences of emotional invalidation can instil the idea that emotional experiences are unacceptable and should not be expressed, potentially encouraging greater inhibition. This may be relevant to forgiveness because inhibiting emotional responses following a transgression can contribute to avoidant or vengeful motivations. Emotional reactivity, which refers to the emotional intensity of a response to an event, was examined in both Chapter 2 and 3. This mediator was considered relevant to forgiveness because stronger emotional responses to a transgression may make it more difficult to regulate and respond benevolently, and to capitalisation because stronger emotional responses in general may influence whether individuals respond and communicate more positively about their experiences to close others. Self-control, which is the ability to regulate behaviours and emotions, was examined only in Chapter 2 as previous literature had demonstrated that there was a strong link between self-control and forgiveness. Theoretically, lower self-control can make it more difficult to inhibit avoidant and vengeful motivations and facilitate more benevolent motivations.

Attitudes towards emotional expression was examined in only Chapter 3 because emotional invalidation has shown to contribute to negative beliefs about the expression of

emotions and expression is a key aspect of this relational process. Negative attitudes may reduce individuals' willingness to communicate positive experiences (i.e., capitalise) with close others, potentially due to the fear of being rejected. Finally, attachment anxiety and avoidance were examined only in Chapter 4 as previous literature has demonstrated that there was a strong link between insecure attachment and gratitude. Theoretically, gratitude expression and perceptions may be skewed by insecure expectations and concerns regarding the responsiveness of a romantic partner. As such, experiences of emotional invalidation in childhood may contribute to insecure relationship expectations, which may subsequently influence how individuals perceive and respond to positive actions from their partner as well as the overall gratitude experience.

Together, these mediators were selected as each represents a theoretically relevant process through which emotional invalidation could influence said relationship maintenance process. Examining different mediators across chapters therefore allowed this thesis to consider mechanisms that were specifically relevant to forgiveness, capitalisation, and gratitude, rather than assuming that the same mechanism would account for associations across all three outcomes.

Chapter 2: The impact of invalidating emotional experiences in childhood on forgiveness in close relationships.

Abstract

Effective emotion regulation is essential for interpersonal contexts in which people need to prioritise prosocial motivations over self-protective motivations, such as forgiving someone after a transgression. However, people who grew up in emotionally invalidating home environments where their reactions were dismissed may struggle to appropriately respond to transgressions as well as experience difficulties with emotion regulation, including reactivity, inhibition and suppression. Across three correlational studies ($N_{total}=691$) that examined forgiveness towards a partner's transgressions (i.e., infidelity, Study 1; participant-generated, Studies 2-3), we found that people who reported that they grew up in emotionally invalidating environments were less forgiving, espousing less benevolence motivations (Studies 1-2), and more avoidance (Studies 1-3) and revenge (Studies 2-3) motivations after a transgression. Serial mediation models suggested that these associations may be explained by the indirect effects of negative emotional reactivity and lower self-control. People who experienced relatively greater emotional invalidation in childhood were less likely to forgive their close others for transgressions, in part because they experience more intense reactions to their negative emotions and are less able to engage self-control. This collection of studies provides important insights into how people who believe they have been invalidated by *caregivers* in the past feel about forgiving their *partners* in the present and further supports existing literature on the negative consequences of invalidating emotional environments on the self and emotional processes.

Introduction

General overview

Our childhood environments profoundly impact our emotion regulation and self-view as adults. We learn from our caregivers how to respond to emotional situations and how to react to them (Denham, 2007; Miller, Kliewer & Partch, 2010) and these experiences can have lifelong implications. For example, having your emotional needs invalidated during childhood can lead to emotional and interpersonal dysregulation in adulthood (e.g. Selby, Braithwaite, Joiner & Fincham, 2008). Studies have indicated emotional invalidation during childhood, whereby a child is continuously criticised and dismissed by caregivers for expressing and communicating their thoughts and feelings (Linehan, 1993), is associated with the emotion regulation strategy of suppression (i.e. not expressing emotions; Krause, Mendelson & Lynch, 2003) in addition to increased emotional reactivity (i.e., feeling negative emotions more intensely; Shenk & Fruzzetti, 2011).

Given the connection between childhood emotional invalidation and emotional regulation (e.g., emotional inhibition; emotional reactivity), emotional invalidation may also influence interpersonal behaviours, namely forgiveness. Forgiveness can be characterised as the expression of benevolent motivations towards a transgressor, and/or the inhibition of malevolent motivations including vengeance and the desire to withdraw and avoid that person (McCullough, Worthington Jr & Rachal, 1997). With forgiveness being an emotional process (Ho, Van Tongeren & You, 2020), those who experience this dysregulation in adulthood as a result of emotional invalidation may struggle to overcome transgressions more positively. For instance, they may want to respond to a transgression by walking away from, or even seeking vengeance against the person who inflicted harm. With satisfying long-term relationships being characterised as the ability to inhibit selfish and self-protective impulses in order to prioritise prosocial motivations (Murray, 1999; Murray, Holmes & Collins, 2006), it is vital

to put personal impulses aside and behave in the best interest of the relationship by offering forgiveness (Finkel, Rusbult, Kumashiro & Hannon, 2002). Thus, we propose that emotional invalidation in childhood influences forgiveness in close relationships. We suggest that this could perhaps be due to the emotion dysregulation commonly associated with emotional invalidation in childhood.

The impact of emotional invalidation in childhood on emotion regulation

Early childhood experiences with primary caregivers are the first environments in which individuals learn to understand their emotions and its consequences (Denham et al., 2003). This is achieved not only through observation of caregivers (Denham, 2007), but also through experiences in which caregivers validate (or invalidate) their emotional experiences. In emotionally invalidating childhood environments, children are continuously criticised and punished by caregivers for expressing and communicating their thoughts and feelings, even when these reactions are contextually appropriate (e.g., crying after an injury; Linehan, 1993). Consequently, children in these environments develop a weakened sense of awareness of their own emotions and feel like they are not allowed to express them, leading to self- invalidation (i.e., dismissing and criticising one's own emotional experiences; Lambie & Lindberg, 2016; Williams, 2010).

The consequences of these negative early emotional environments extend into adulthood. For example, people who grew up in emotionally invalidating environments struggle with emotion regulation strategies in adulthood compared to those with emotionally validating childhood environments (Hope & Chapman, 2019; Reeves, 2007). Furthermore, past research has shown that emotional invalidation in childhood is associated with heightened emotional reactivity (Shenk & Fruzzetti, 2011), such that they are more likely to feel caught up and carried away by both positive and negative emotional experiences. This

emotional dysregulation also takes the form of chronic inhibition and suppression of emotions (Krause et al., 2003), often occurring as a consequence of their negative attitudes towards emotional expression and their belief that expressing emotions is something to be avoided (Haslam et al., 2012). However, despite recognising the important consequences emotional invalidation in childhood has on adult emotion regulation and functioning (Reeves, 2007), there is limited research examining the specific consequences for processes which shape healthy adult relationships.

Emotion regulation and forgiveness in adult relationships

Emotion regulation plays a critical role in supporting healthy adult relationships (Gross & John, 2003; English, John & Gross, 2013). Even in loving and supportive relationships, hurt feelings and disappointment are inevitable. To protect the relationship, one has to be able to override the self-protective motivations (such as avoidance or vengeance) that arise from these negative emotions, and instead prioritize reconnection with a partner following such transgressions (Cavallo et al., 2014; Murray et al., 2006). Forgiveness is one such prosocial behaviour that captures the willingness to forgo destructive responses—such as retaliation, resentment, and avoidance—in favour of more constructive responses such as benevolence (Ehteshamzadeh et al., 2011; McCullough, 2000, 2001; McCullough et al., 1997; Rusbult et al., 1991). Forgiveness is essential for long-term relationship success, contributing to greater trust and harmony (Exline & Baumeister, 2000), relationship satisfaction and commitment (Worthington, 1998; Braithwaite, Selby & Fincham, 2011), and marital adjustment (Woodman, 1991).

This balance between constructive and destructive responses to transgressions means that forgiveness is heavily influenced by a person's ability to recognise and regulate their emotions (Ho, Van Tongeren & You, 2020). Inhibiting the desire for vengeance or avoidance

following a transgression requires self-control (Finkel & Campbell, 2001; Ho, Liang & Van Tongeren., 2024; Pronk et al., 2019) while simultaneously upregulating their experience of positive emotions in order to adopt benevolent motivations (i.e. empathy, compassion; Worthington & Wade, 1999). Low self-control and inhibition makes people more inclined to act vengefully and resentfully, and less likely to behave from benevolent pro-relationship motives when they have experienced a transgression (Burnette et al., 2014). Forgiveness is also more challenging for people who experience strong emotional reactivity (Ercengiz et al., 2023), and those who struggle to inhibit their negative emotions (Berry et al., 2005).

Given that emotional invalidation in childhood is associated with emotional dysregulation processes in adulthood, including reactivity, and inhibition, people who have grown up in invalidating environments may struggle with forgiveness in their adult relationships. However, the association between emotional invalidation and forgiveness has not been explored in past research. Consequentially, there is a gap in the broader understanding of how emotional invalidation in childhood shapes the mechanisms which support healthy relationship functioning.

Chapter overview

The experiences people have in childhood have important implications for interpersonal wellbeing in adulthood. This should be particularly true for emotion regulation processes, which shape how people respond to situations in which people must prioritise prosocial motivations over more self-protective ones in their relationships, such as forgiveness. However, this association has not been previously investigated. The current research aimed to address the limitation in the extant literature by testing, across 3 cross-sectional studies, whether emotional invalidation is positively or negatively associated with forgiveness and the underlying emotion regulation mechanisms which support this association. Because forgiveness is a complex process that involves upregulating prosocial

emotions (e.g., benevolence) while simultaneously downregulating destructive emotions (e.g., avoidance, resentment, vengeance), we had competing hypotheses as to whether the association between emotional invalidation in childhood and forgiveness would be positive or negative depending on whether it was driven by emotional inhibition or emotional reactivity.

Emotional invalidation in childhood is associated with emotional inhibition and suppression (Krause, Mendelson & Lynch, 2003). Thus, although this may make it easier for people to inhibit their more destructive motivations such as avoidance and vengeance following a transgression, it may also inhibit their prosocial feelings of benevolence making forgiveness less likely. Similarly, emotional invalidation in childhood is also associated with emotional reactivity (i.e., more intense emotional reactions; Shenk & Fruzzetti, 2011) to interpersonal events and stressors. This means that people might feel hurt associated with transgressions more intensely, and for a longer period of time, than people who are less emotionally reactive. Consequently, this might lead someone with a history of emotional invalidation in childhood to prioritise self-protection motivations by endorsing avoidance and/or revenge following a transgression, rather than the more prosocially oriented motivations of benevolent forgiveness.

Specifically, we predicted that if emotional invalidation led to inhibition of destructive emotions, people may be able to experience more benevolence towards transgressors and therefore more forgiveness. By contrast, if emotional invalidation led to greater negative emotional reactivity that made it challenging to suppress negative motivations following a transgression, then people would express less forgiveness. The analytic strategy for each study was pre-registered. The pre-registration of the analytic strategy¹, survey materials, aggregate data, and syntax can be found on the project repository

¹ Due to a typographical error in the pre-registration document that was not identified prior to submitting the document, we are only pre-registering the analytic strategy for these studies rather than the hypotheses.

on the Open Science Framework (OSF;

https://osf.io/vyx3c/?view_only=0e503c56672b4460b0997571e4c68c12). All studies

reported in this paper received approval from the University of Essex Ethics Sub-committee

3.

Study 1

Study 1 provided our initial test of whether emotional invalidation in childhood influences forgiveness in the context of infidelity, and further examined whether emotional reactivity, emotion regulation and self-control mediates this association.

Method

Participants

Three hundred and fifty-four participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 30.960$, $SD = 13.682$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and April 2023. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, sixty-five were excluded from analyses for incomplete responses, for a final sample of 289 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 289 participants should have provided 80% power to detect a minimum effect size of $f^2 = .027$ (G*Power v.3.1.9.7).

Most participants were women (74%; 24% men; 2% other gender identity), white (80%; 9% Asian; 4% Black; 3% Mixed ethnicity), straight (86%; 4% gay/lesbian; 9% bisexual; 1% not listed) and in monogamous relationships (92%; 4% consensually non-

monogamous; 4% other). Participants had been in a relationship for 8.43 years on average ($SD = 9.75$) and the highest percentage of participants were single (35%; 3% casually dating; 35% in a committed relationship; 5% engaged; 22% married).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender, relationship status) followed by measures of emotional invalidation in childhood, emotion inhibition, emotional reactivity and self-control. Next, participants were asked to think about a time when either their current partner, an ex-partner, or a hypothetical partner had committed an infidelity. Participants then completed a measure of forgiveness which taps into benevolence and avoidance motivations. Finally, all participants were thanked for their participation and fully debriefed. Table 1 presents the descriptive statistics for Study 1.

Table 1 - Descriptive statistics and correlations for Study 1

	1	2	3	4	5	6	7
1. Emotional Invalidation	-	.053	-.048	-.326***	.226***	-.299***	.261***
2. Avoidance		-	-.490***	-.224***	.055	.041	.240***
3. Benevolence			-	-.034	.021	.016	.068
4. Self-control				-	-.095	.184**	-.410***
5. Emotion Inhibition					-	-.160**	.081
6. Positive Reactivity						-	-.170**
7. Negative Reactivity							-
M	2.213	3.630	2.177	3.000	3.806	3.656	3.534
SD	.800	.830	1.083	.744	1.331	.785	.909
Scale Range	1-5	1-5	1-5	1-5	1-7	1-5	1-5

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Emotional Invalidation in Childhood. Emotional invalidation in childhood was measured using the 14-item ($\alpha = .922$) Invalidating Childhood Environment Scale (ICES; Mountford, Corstorphine, Tomlinson & Waller, 2007), adapted to refer to both parents rather than each caregiver individually (e.g. “My parents would become angry if I disagreed with them.”; 1 = *never*, 5 = *all the time*). Items were averaged after being reverse coded, with higher scores reflecting greater emotional invalidation in childhood.

Forgiveness. Forgiveness was measured using the 10-item Marital Offence-Specific Forgiveness Scale (Paleari, Regalia & Fincham, 2009; 1 = *strongly disagree*, 5 = *strongly agree*). The scale includes two subscales: resentment-avoidance motivations ($\alpha = .727$; e.g. “Since my partner behaved that way, I have been less willing to talk to her/him.”) and benevolence motivations ($\alpha = .838$; e.g. “Since my partner behaved that way, I have done my best to restore my relationship with her/him.”). Items were averaged within sub-scales, with higher scores reflecting more resentment-avoidance and benevolence motivations respectively. Following past research, forgiveness was characterised as relatively higher benevolence motivations, and relatively lower resentment-avoidance motivations (McCullough, 2001).

Positive and Negative Emotional Reactivity. Participants completed a measure of emotional reactivity using the Perth Emotional Reactivity Scale – Short form (Preece, Becerra & Campitelli, 2019). This is an 18-item scale assessing individual differences in emotional reactivity, specifically activation, intensity and duration (e.g. “When I’m happy, the feeling stays with me for quite a while.”, “When I’m upset, it takes me quite a while to snap out of it.”; 1 = *very unlike me*, 5 = *very like me*). This scale measures reactivity to positive and negative emotions separately. Items were averaged across items of the same

valence to create sub-scales of positive reactivity ($\alpha = .898$) and negative emotional reactivity ($\alpha = .906$), collapsing across the domains of activation, intensity, and duration. Higher scores reflect greater positive and negative emotional respectively.

Emotion inhibition. Emotion inhibition was measured using the four² expressive suppression items ($\alpha = .799$) from the 10-item Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; e.g. “I control my emotions by not expressing them.”; 1 = *strongly disagree*, 7 = *strongly agree*). Items were averaged and higher scores reflect greater emotional inhibition.

Self-control. Participants completed the 13-item Brief Self-Control Scale ($\alpha = .845$; Tangney, Baumeister and Boone, 2018; Lindner, Nagy & Retelsdorf, 2015) assessing dispositional self-regulatory behaviours (e.g., “I am good at resisting temptation”; 1 = *strongly disagree*, 5 = *strongly agree*). Items were averaged and higher scores reflect greater self-control.

Results

We first tested the hypothesis that emotional invalidation in childhood would be associated with a) benevolent motivations and b) avoidance motivations regarding infidelity, using linear regression controlling for the effect of transgression target (dummy coded with hypothetical partners as the referent group; Table 2). As predicted, childhood emotional invalidation was negatively associated with benevolence motivations when thinking about an infidelity, $b = -.165$, $t(288) = -2.257$, $p = .025$, 95% CI $[-.309, -.021]$, and positively associated with resentment-avoidance, $b = .120$, $t(288) = 2.035$, $p = .043$, 95% CI $[.004, .236]$. This suggests that people who recalled experiencing relatively greater emotional

² Participants completed the entire 10-item scale, however we only focused on the suppression subscale as we had no a priori hypotheses as to the association between cognitive reappraisal, emotional invalidation in childhood and forgiveness.

invalidation in childhood were less likely to have experienced (past & current partners) or anticipated experiencing (hypothetical partners) less benevolent motivations for forgiving their partners, and more resentment and avoidance motivations when thinking about an infidelity, than those who recalled relatively less emotional invalidation in childhood.

Table 2 – Model coefficients predicting avoidance and benevolence for Study 1

Predictors	Dependent Variables			
	Avoidance		Benevolence	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotion Invalidation	.120	2.035*	-.165	-2.257*
Partner as Transgressor	-.940	-5.925***	1.629	8.257***
Ex-partner as Transgressor	-.263	-2.661**	.203	1.650

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. The referent group for transgressors were hypothetical partners.

The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Indirect effects of emotion regulation.

Consistent with past literature, emotional invalidation was significantly and positively correlated with emotional inhibition and negative emotional reactivity, and negatively correlated with self-control and positive emotional reactivity ($ps < .001$). In order to understand whether the observed negative association between emotional invalidation and forgiveness can be understood through differences in emotion processing, we tested for the indirect effects of emotional inhibition, positive and negative emotional reactivity, and self-control using Hayes PROCESS Model 4 (Hayes, 2017). The indirect effects were tested using the percentile bootstrapped estimation approach with 10,000 samples (Shrout & Bolger, 2002).

Both the indirect effects of self-control ($\beta = .083$ $SE_{bootstrapped} = .027$, $CI_{bootstrapped} [.037, .142]$), as well as negative reactivity ($\beta = .072$, $SE_{bootstrapped} = .024$, $CI_{bootstrapped} [.031, .124]$), predicted resentment-avoidance motivations after an infidelity were significant. People relatively higher in emotional invalidation were more likely to experience negative emotional reactivity and less self-control, which made them more inclined to engage in resentment-avoidance motivations when imagining or recalling an infidelity (Figures 1 & 2). Furthermore, serial mediation analyses using Hayes PROCESS Model 6 suggests that negative emotional reactivity contributes to lower self-control, thus contributing to greater resentment and avoidance motivations ($\beta = .016$, $SE_{bootstrapped} = .008$, $CI_{bootstrapped} [.004, .033]$; Figure 3).

The indirect effects of positive reactivity were not significant, nor were the indirect effects predicting benevolence motivations (see Appendix A).

Figure 1 - Indirect association between emotional invalidation and avoidance motivations via self-control

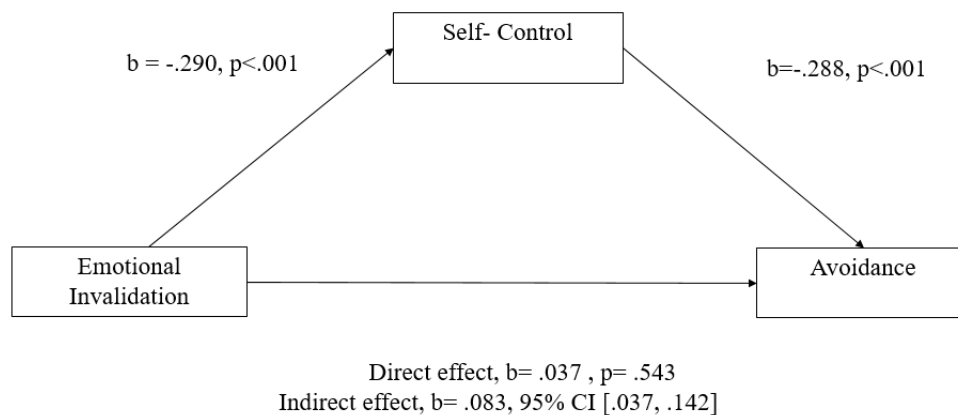


Figure 2- Indirect association between emotional invalidation and avoidance motivations via negative reactivity

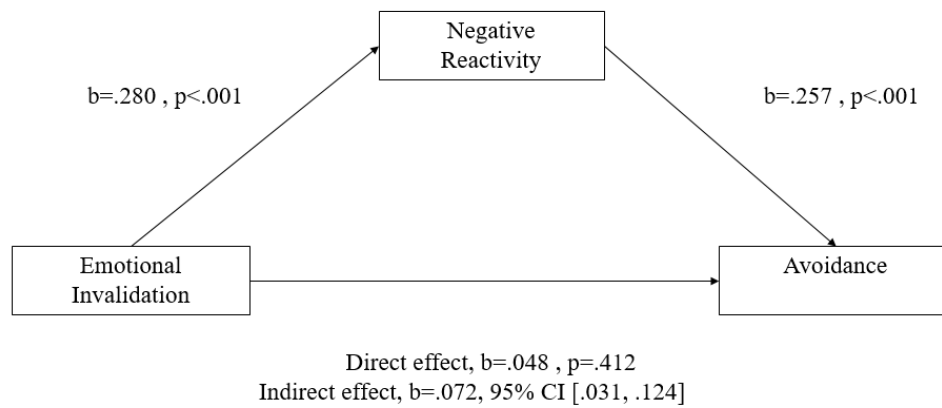
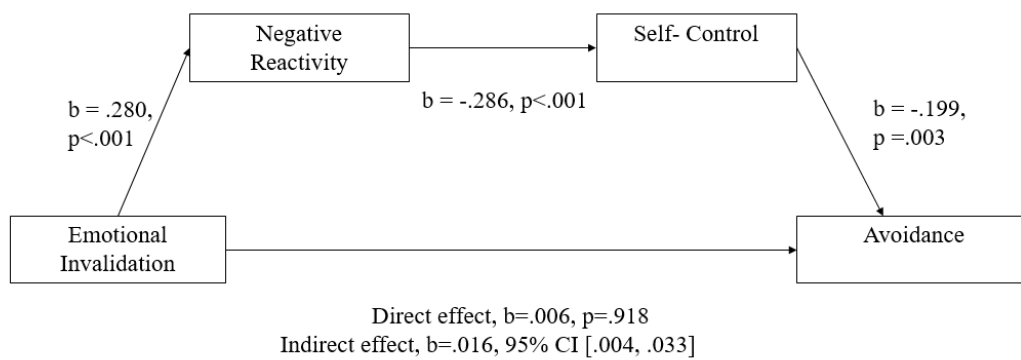


Figure 3 - Indirect associations between emotional invalidation and avoidance motivations via negative reactivity and self-control



Study 2

Study 1 provided preliminary evidence that emotional invalidation in childhood was negatively associated with forgiveness (i.e., lower benevolence and greater avoidance) when people thought about real or imagined infidelities by a past or present partner. However, not everyone in the sample had experienced an infidelity, and for those who had, not all were still with the transgressing partner. Thus, the forgiveness context in Study 1 may have lacked self-relevance in many meaningful ways. Thus, the aim of Study 2 was to replicate the findings

from Study 1 and extend them beyond a specific transgressional context identified by the researchers, by asking participants to self-select a past transgression by their current partners.

Method

Participants

Two hundred and twenty-three participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 26.180$, $SD = 8.649$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and April 2023. Participants who were eligible for course credit received 0.5 credits for participating. All others were uncompensated volunteers. Twenty-one of the eligible participants were excluded from analyses for incomplete responses, leaving a final sample of 202 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 202 participants should have provided 80% power to detect a minimum effect size of $f^2 = .039$ (G*Power v.3.1.9.7).

Most participants were women (76%; 21% men; 3% other gender identity), white (57%; 21% Asian; 9% black; 6% mixed ethnicity), heterosexual (73%; 5% gay/lesbian, 17% bisexual; 5% not listed) and in monogamous relationships (90%; 4% consensually non-monogamous; 6% other). Nearly half of the participants were single (43%; 31% exclusively dating or in a committed relationship; 11% casually dating; 4% engaged; 11% married). Of those that were in a relationship, the average relationship length was 4.87 years ($SD = 5.68$).

Procedures

Eligible participants were first asked background and demographic questions (e.g., age, gender, relationship satisfaction), followed by the same measure of emotional

invalidation in childhood, emotional inhibition³, positive and negative emotional reactivity, and self-control as Study 1. Next, participants were asked to think about a time when either their current partner (romantically attached participants), an ex-partner (single participants who had dated before), or their best friend (single participants who had never dated) had betrayed their trust or hurt their feelings. Participants then completed a new measure of forgiveness which taps into benevolence, avoidance, and revenge motivations. Finally, participants were thanked for their participation and fully debriefed. Table 3 presents the descriptive statistics for Study 2.

Table 3 - Descriptive statistics and correlations for Study 2

	1	2	3	4	5	6	7	8
1. Emotional Invalidation	-	-.293***	-.226***	.341***	-.245***	.227***	-.063	.253***
2. Avoidance		-	.608***	.496***	-.051	.241***	-.060	.092
3. Benevolence			-	-.412***	.016	-.073	.130	.070
4. Revenge				-	-.126	.092	-.062	.181**
5. Self-control					-	-.097	.137	-.394***
6. Emotion Inhibition						-	-.233***	.086
7. Positive Reactivity							-	-.076
8. Negative Reactivity								-
M	2.467	3.214	3.209	2.218	3.029	2.959	3.631	3.451
SD	.808	.990	.911	.875	.731	.943	.780	.880
Scale Range	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

³ Note that in Study 2, emotion inhibition was measured using the same scale as Study 1 but measured on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) instead of the 7-point scale used in Study 1. This methodological change should have minimal impact on the reliability of the pattern of effects across studies, as scales using 5- and 7-point scales result in nearly identical means when rescaled, suggesting they capture similar sentiments (Dawes, 2008). Nonetheless, readers should exercise caution when interpreting the raw means across studies.

Materials

Forgiveness. Forgiveness was measured using the 18-item Transgression-Related Interpersonal Motivations scale (TRIM-18; McCullough & Hoyt, 2002). The TRIM-18 captures benevolence motivations. However, unlike the Marital Offenses Inventory, it delineates between more inhibitory destructive motivations like avoidance, and more approach-oriented destructive motivations like vengeance. Participants indicate their agreement to each item on a 5-point Likert scale (e.g., avoidance motivations; $\alpha = .898$; “I am living as if he/she doesn’t exist, isn’t around”; vengeance motivations; $\alpha = .833$; “I’m going to get even”; benevolence motivations; $\alpha = .877$; “I want us to bury the hatchet and move forward with our relationship”; 1 = *strongly disagree*, 5 = *strongly agree*). Items were averaged across each motivational subscale, and higher scores reflect greater endorsement of each motivation.

Results

We used the same analytic strategy as Study 1, regressing a) benevolence, b) avoidance and c) revenge motivations on emotional invalidation, controlling for target (dummy coded with partner as the referent group). Table 4 presents the model coefficients. As hypothesised, we found that our hypotheses were fully supported; emotional invalidation in childhood significantly predicted avoidance, vengeance and benevolent motivations. When controlling for the target they are forgiving i.e. a current partner, former partner, or a best friend, emotional invalidation significantly predicted avoidance, benevolent and revenge motivations. Consistent with the findings from Study 1, and with our hypotheses, emotional invalidation in childhood was positively associated with avoidance, $b = .339$, $t(201) = 4.379$, $p < .001$, 95% CI [.187, .492], and revenge motivations $b = .354$, $t(201) = 4.883$, $p < .001$, 95% CI [.211, .497], and negatively associated with benevolence motivations $b = -.219$,

$t(201) = -2.893, p = .004, 95\% CI [-.369, -.070]$. Thus, people who experienced relatively greater emotional invalidation in childhood were less forgiving of close others' transgressions, as evidenced by having more negative motivations and less benevolent motivations when thinking about a past transgression.

Table 4 – Model coefficients predicting avoidance, benevolence, and revenge for Study 2

Predictors	Dependent Variables					
	Avoidance		Benevolence		Revenge	
Independent Variables	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotion Invalidation	.339	4.379***	-.219	-2.893**	.354	4.883***
Ex-partner as Transgressor	.718	4.938***	-.606	-4.262***	.307	2.260*
Friend as Transgressor	.846	4.899**	-.378	-2.239*	.247	1.528

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. The referent group for transgressors were partners.

The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Indirect effects of emotion regulation

Although we tested all the same indirect effects as Study 1, we limit our discussion to the indirect effects of self-control and negative emotional reactivity which were significant in the previous study. All models are available in Appendix A. Unlike in Study 1, the indirect effects of self-control and negative emotional reactivity, and their serial mediation effect, were not significant. Thus Study 2 failed to provide support for how specific emotion regulation experiences for people who have experienced emotional invalidation in childhood may influence their avoidance motivations and forgiveness.

Study 3

Studies 1 and 2 provided consistent support for our hypotheses using two different measures of forgiveness, and two different types of transgressions (i.e., specific transgressions such as infidelity vs. transgressions self-identified by the participants). However, some inconsistencies emerged across studies when testing the indirect effects models. Direct replications are encouraged to be routinely included in psychological science in order to provide accumulated evidence for reliable effects (e.g., Simons, 2014; Zwaan et al., 2018). In Study 3 we therefore directly replicated Study 2 in a novel sample to illustrate the reliability of our findings across studies.

Method

Participants

Two hundred and thirty-five participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 22.310$, $SD = 6.323$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and May 2023. Participants who were eligible for course credit received 0.5 credits for participating. All others were uncompensated volunteers. Thirty-five participants were excluded from analysis for incomplete responses, leaving a final sample of 200 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 200 participants should have provided 80% power to detect a minimum effect size of $f^2 = .040$ (G*Power v.3.1.9.7).

The majority of participants were women (78%; 20% men; 2% other gender identity), white (56%; 19% Asian; 14% Black; 6% mixed ethnicity), heterosexual (78%; 3% gay/lesbian, 18% bisexual; 1% not listed) and in monogamous relationships (92%; 3%

consensually non-monogamous; 5% other). Almost half of the participants were single (42%), with a similar percentage of participants exclusively dating/in a committed relationship (41%; 9% casually dating; 4% engaged; 4% married). Those that were in a relationship had been for 3 years on average ($SD=5.44$). Table 5 presents the descriptive statistics for Study 3.

Table 5 - Descriptive statistics and correlations for Study 3

	1	2	3	4	5	6	7	8
1. Emotional Invalidation	-	.236***	-.073	.229***	-.299***	.330***	-.268***	.221**
2. Avoidance		-	-.609***	.516***	-.318***	.228***	-.179*	.239***
3. Benevolence			-	.479***	.192**	-.062	.230**	-.103
4. Revenge				-	-.251***	.170*	-.217**	.084
5. Self-control					-	-.193**	.315***	-.438***
6. Emotion Inhibition						-	-.291***	.163*
7. Positive Reactivity							-	-.093
8. Negative Reactivity								-
M	2.395	3.106	3.391	2.218	2.795	3.105	3.683	3.712
SD	.819	1.022	.900	.928	.715	1.001	.745	.921
Scale Range	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Results

Replicating the findings from Studies 1 and 2, emotional invalidation in childhood was positively associated with both avoidance, $b = .260$, $t(199) = 3.240$, $p = .001$, 95% CI [.102, .419] and vengeance motivations $b = .233$, $t(199) = 3.075$, $p = .002$, 95% CI [.084, .383]. However, unexpectedly, the association with benevolence motivations was not significant, $b = -.051$, $t(2, 196) = -.685$, $p = .494$, 95% CI [-.197, .095]. This suggests that emotional invalidation in childhood may be more reliably associated with a lack of

forgiveness following a transgression due to more negative motivations (i.e., avoidance, revenge) rather than the absence of more positive motivations such as benevolence. Table 6 presents the model coefficients for Study 3.

Table 6 - Model coefficients predicting avoidance, benevolence, and revenge for Study 3

Predictors	Dependent Variables					
	Avoidance		Benevolence		Revenge	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotion Invalidation	.260	3.240**	-.051	-.685	.233	3.075**
Ex-partner as Transgressor	.800	5.070***	-.652	-4.483***	.577	3.877***
Friend as Transgressor	.770	4.291**	-.592	-3.579***	4.94	2.917**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. The referent group for transgressors were partners.

The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Indirect effects of emotion regulation

Again, focusing on replicating the indirect effects from Study 1, we found that the association between emotional invalidation in childhood and avoidance motivations was mediated by the indirect effects of self-control ($\beta = .088$, $SE_{bootstrapped} = .031$, $CI_{bootstrapped} [.034, .156]$), and negative emotional reactivity $\beta = .060$, $SE_{bootstrapped} = .026$, $CI_{bootstrapped} [.015, .118]$). Furthermore, serial mediation effects highlight the potential importance of how emotional reactivity influences self-control. Notably, replicating the findings of Study 1, the serial indirect effect of negative reactivity and self-control on avoidance motivations was significant ($\beta = .021$, $SE_{bootstrapped} = .011$, $CI_{bootstrapped} [.004, .045]$). See Figures 4-6 for model coefficients. All non-significant models are in Appendix A.

Figure 4 - Indirect association between emotional invalidation and avoidance motivations via self-control

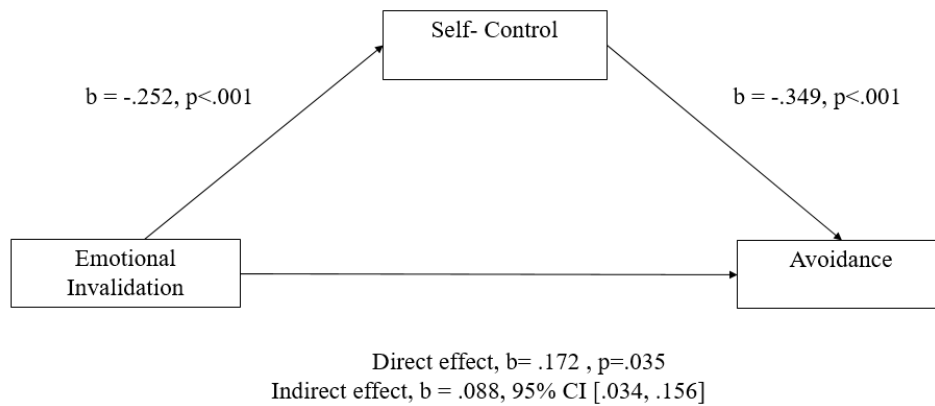


Figure 5 - Indirect association between emotional invalidation and avoidance motivations via negative reactivity

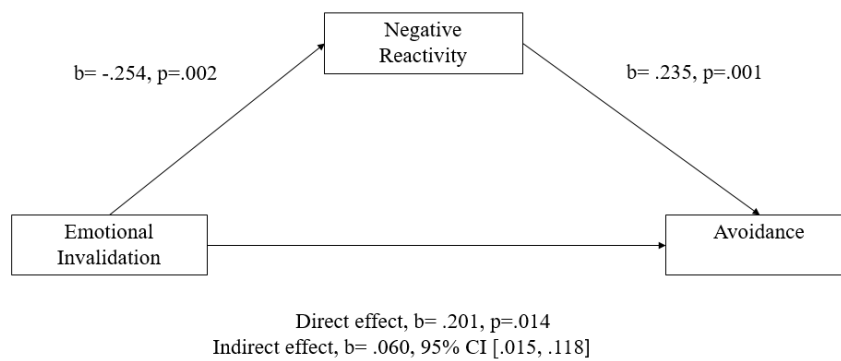
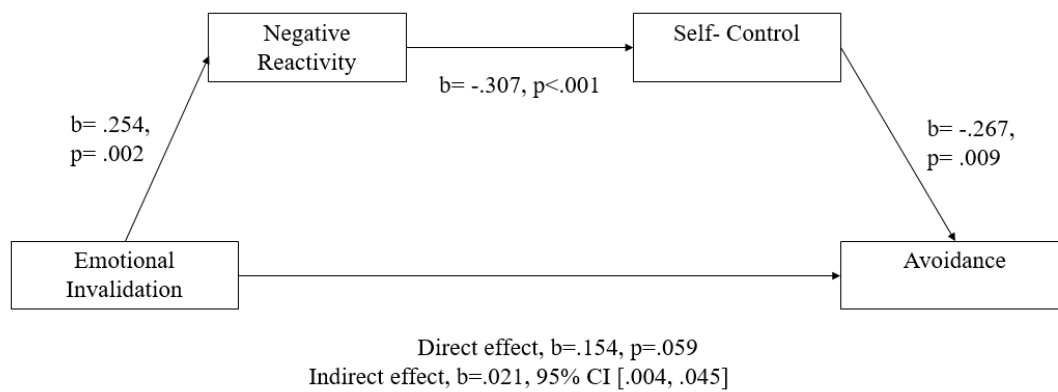


Figure 6 - Indirect association between emotional invalidation and avoidance motivations via negative reactivity and self-control



Discussion

Past work has shown that children who grow up in emotionally invalidating home environments—such as those in which one or both caregivers negate, belittle or otherwise trivialize a child’s emotional world—are more likely to struggle with emotion regulation in adulthood (e.g., more emotional inhibition; more emotional reactivity). Emotion regulation is important for navigating adult relationships, particularly in situations where people must prioritise more prosocial motivations over relationally harmful ones. Forgiveness is also essential for the long-term success of close relationships and requires individuals to override self-protective motivations (e.g., avoidance, resentment, revenge) in favour of connection motivations (e.g., benevolence). As such, we hypothesised that those who had recalled experiences of emotional invalidation in childhood were more likely to struggle with forgiveness in adulthood.

As predicted, across three studies, we found consistent evidence that people who recalled experiencing emotional invalidation in childhood were more likely to struggle with forgiveness in adulthood. Notably, emotional invalidation was associated with more avoidance and vengeance motivations (Studies 1-3), and less benevolence motivations (Studies 1 & 2 only), as characterised by McCullough (2001), when recalling past transgressions or imagining future ones. Furthermore, we found that these associations may be best understood through the indirect effects of emotional dysregulation and low self-control. People who experienced emotional invalidation in childhood were more likely to experience reactivity to negative emotions, which was subsequently associated with poor trait self-control, and less forgiveness (Study 1 and 3).

Implications

Despite some of the inconsistencies across studies, our findings nonetheless have important implications for the broader understanding of how life histories shape experiences in adulthood. First, the findings build on past work (e.g., Krause et al., 2003; Shenk & Fruzzetti, 2011; Hope & Chapman, 2019; Reeves, 2007) by illustrating how childhood experiences with emotional invalidation can have important consequences for emotion regulation later in life by influencing interpersonal processes such as forgiveness. Although this project focuses on just one interpersonal process influenced by emotion regulation (e.g., forgiveness), the interdependent nature of relationships means that people are regularly faced with dilemmas which pit self-protection goals against prosocial goals, and navigate both positive and negative experiences with close others (Holmes, 2002; Murray et al., 2008). Our findings suggest that experiences with invalidation early in life is likely to have important consequences for many different facets of interpersonal life (e.g., navigating conflict, sharing positive news, providing emotional support).

Additionally, our findings suggest that emotional invalidation has several negative consequences for the self. We have extended previous literature by exploring self-control (e.g. self-criticism; Naismith, Zarate Guerrero & Feigenbaum, 2019) and provided insight into how the consequences of invalidation in childhood go beyond processes associated with emotion regulation but also self-regulation (i.e. exhibiting less self-control). These feelings of dysregulation are a problem because of the effort it takes to inhibit destructive bad behaviours and engage in prosocial ones instead (Tangney, Baumeister & Boone, 2018), something that is an important process needed in interpersonal relationships. In the context of forgiveness, low self-control will make you more inclined to act impulsively, including more vengefully and less likely to behave from pro-relationship motives when you have experienced a transgression. When people have high self-control, they are better equipped to override

selfish and destructive impulses in favour of more adaptive behaviours (Baumeister & Vohs, 2007) and thus more likely to forgive (Burnette et al., 2014; Finkel & Campbell, 2001; Ho et al., 2024; Pronk et al., 2019). Our findings have extended this literature by illustrating that childhood experiences with emotional invalidation have negative consequences on self-regulation as well as emotional mechanisms.

Our findings are of importance as much of the past work on emotional invalidation has focused on the struggles among people who have been clinically diagnosed, or have symptomologies consistent with mental health disorders (e.g., eating disorders, Gonçalves, Moreira, Gonçalves, Vieira, & Machado, 2020; borderline personality disorder, Selby et al., 2008). As not everyone who experiences adversity in childhood develops psychological disorders (Fergusson & Horwood, 2003; Seery, 2011; Seery et al., 2010), it was of importance to explore and provide support for how experiences with emotional invalidation in childhood affect important relational processes more broadly speaking, which our research has successfully done.

Limitations and future directions

Despite the novelty and important implications of our studies, they are not without their limitations. Firstly, it is important to note that not all of our findings consistently replicated across all studies. Although the associations between emotional invalidation and avoidance and vengeance replicated across the studies, the associations with less benevolence only replicated in two of the three studies. Likewise, the indirect effects of negative reactivity and self-control only replicated in two of three studies. Inconsistencies across studies are a common feature of psychological research, particularly when effects are small or influenced by context (e.g., nature of the transgression; how *partners* behave following transgressions; Maner, 2014). And singular failures to replicate should not be considered conclusive

evidence that a theory is invalid or a finding is noise (Simons, 2014). Likewise, it is important to avoid interpreting null effects. The inconsistencies observed in our studies may also be due to differences in methodologies (e.g., reflecting on a specific type of transgression vs. prompt for participants to self-select transgression; hypothetical vs. lived transgressions), or because reflecting on a transgression in hindsight may not reliably activate the same emotional processes as they do when they are experienced in vivo.

Likewise, some of the inconsistencies between studies may be due to differences in the transgression measures. In Study 1, the transgression measure used only included two subscales (benevolence and avoidant-resentment), whereas in Studies 2 and 3, there were three subscales (benevolence, avoidance, vengeance). Thus, these subtle differences may influence how variance was partitioned across outcomes. Following guidance on effect size benchmarks from Kenny (2025), the indirect effects observed in Studies 1 and 3 were small to moderate (β s = .016-.088; .01 = small, .09 = medium, .25 = large; Kenny, 2025). Small effects are more susceptible to sampling variability and measurement error. Consequently, small effects can be less stable across samples, and their magnitude may vary substantially from study to study. Thus, future research should consider replicating these findings in larger samples to help identify the more robust associations and mechanisms which link childhood emotional invalidation with forgiveness in adult relationships. Nonetheless, small effects can still be meaningful when they reflect patterns that extend to large proportions of the population (e.g., Carey et al., 2023; Etz & Arroyo, 2015), and are essential to cumulative scientific contributions (Götz et al., 2022).

Another potential limitation is that participants were instructed to think about a recent transgression, but there was no mechanism in the study through which to control for how long it had been since the transgression had occurred. This may have introduced substantial variability in the emotional saliency of these experiences across participants, particularly in

Study 1 where some participants were recalling past infidelities by a partner with whom they were no longer in a relationship (Phelps & Sharot, 2008). Such measurement inconsistencies can undermine the reliability of the observed effects. Similarly, the approach of retrospective self-reports of emotional invalidation in childhood, as well as reactions to past transgressions, are susceptible to inaccuracies and biased recall, and may not evoke the same emotional procedures as when they are experienced in real time. However, this research is not the first to use retrospective measurements of emotional invalidation in adult populations (e.g., Mountford et al., 2007), and forgiveness (e.g., Paleari, Regalia & Fincham, 2009; McCullough & Hoyt, 2002).

Nonetheless, future studies could use methods which measure transgressions closer to their point of occurrence. For example, momentary experience sampling techniques and/or daily diary sampling would allow people to reflect on transgressions and how they have responded to these transgressions, within more constrained timeframes. Additionally, longitudinal studies tracking people from childhood through adulthood could more objectively measure emotional invalidation in formative years, and track its implications for adult relational well-being. Nonetheless, despite the potential limitations of our studies, they provide important insights into how people who believe they have been invalidated by *caregivers* in the past feel about forgiving their *partners* in the present.

Conclusion

To maintain long-term, satisfying relationships, people need to be able to forgive others following a transgression by overriding self-protective motivations in favour of more prosocial connection motivations. However, not everyone grows up in environments which equip them with these skills. People who experience more emotional invalidation in childhood are less likely to forgive close others who transgress against them, in part because

they lack the effective emotional regulatory skills to do so. Our studies support the idea that emotional validation in childhood has important consequences for relationships in adulthood, in particular for processes which rely on effective emotional regulation such as forgiveness.

Chapter 3: The impact of invalidating emotional experiences in childhood on sharing positive news in close relationships.

Abstract

Children who grow up in emotionally invalidating environments in which caregivers dismiss, criticise and punish them for their thoughts, feelings and behaviours often experience negative outcomes in adulthood. This maladjustment is typically in the form of difficulties with emotion regulation, such as reactivity, suppression, and negative attitudes towards sharing emotions. These processes are important in interpersonal contexts as regulating emotions enables individuals to share positive experiences openly and respond supportively to others, thereby fostering trust and deepening social bonds. Across three correlational, and one experimental study ($N_{total} = 775$), I examined whether people who had experienced emotional invalidation in childhood shared positive news with a close other (Study 4 & 5) and how perceptions of someone's invalidation during childhood influenced the likelihood of sharing positive news with them (Studies 6 & 7). In the first two studies I found that people who grew up in emotionally invalidating environments were less likely to capitalise with a close other, and this association emerged indirectly through having more negative attitudes towards emotional expression and fear of social rejection. In Study 6, I found that individuals who were presented with a description of someone being invalidated in childhood were less likely to capitalise with them, but this finding did not extend to sharing good news with a partner who had a perceived history of invalidation (Study 7). Overall, these findings suggest that experiences of emotional invalidation in childhood have important consequences for relationships in adulthood, in particular for processes which rely on emotional expression such as capitalisation.

Introduction

General overview

The environment in which we grow up in influences the way we navigate the world, typically through learning about emotions and behaviour from parents and caregivers. Negative emotional experiences in childhood can lead people to experience difficulties in adulthood both emotionally (e.g., Caskey, 2022) and interpersonally (e.g., Brandão, 2024). One specific type of experience is emotional invalidation, whereby caregivers dismiss, criticise or trivialise their child's emotions (Linehan, 1993). Adults who reported emotional invalidation by parents in childhood were more likely to suppress their emotions when interacting with others (Krause, Mendelson & Lynch, 2003) and negatively view emotional expression (Haslam, Arcelus, Farrow & Meyer, 2012).

One important area of interpersonal life that might be affected by this is how people respond to positive disclosures. Capitalisation is a relational process that involves sharing positive experiences with a close other. The likelihood of someone sharing good news is often dependent on how enthusiastically they expect the other person to respond (Langston, 1994). Because committed and satisfying relationships are reliant on the ability to feel safe with a partner and believe that they will respond supportively to strengthen the relationship (Gable et al., 2004), the mechanisms behind capitalisation are important to examine. People with histories of emotional invalidation must decide whether they are going to share their positive emotional experiences with others, with them typically down-regulating positive emotion (Greenaway & Kalokerinos, 2017) and fearing how their self-disclosure of positive will be received (Haslam et al., 2012). Consequently, they may forgo the opportunity for connection through capitalisation.

Furthermore, capitalisation is heavily reciprocal, so it is important to explore how people capitalise with those that have experienced emotional invalidation. Research has shown there are individual differences regarding the likelihood of sharing positive news with others. For example, people are less likely to capitalise with those they believe have low self-esteem (MacGregor & Holmes, 2011) because they want to protect them from emotional discomfort and not contribute to their feelings of insecurity (Exline & Lobel, 1999). These findings might help explain how emotional invalidation shapes capitalisation, as emotional invalidation draws on having negative expectations about emotions and overall relationships (Ceylan & Koç, 2026; Huxley, Seaton & Grenyer, 2021) and knowledge of this might make the discloser apprehensive to share positive emotion. As such, we believe that those are less likely to capitalise with people who they believe to or have experienced invalidation. Overall, we believe that emotional invalidation in childhood influences capitalisation in close relationships because of the consequence invalidation has on negatively viewing emotional expression and the characteristics associated with emotional invalidation.

Emotional Invalidation

Learning how to effectively express your emotions is an important skill for children to know but not everyone can grow up in an environment that facilitates this. Parental responsiveness is crucial for children to learn emotional processing and how to articulate their feelings, (i.e., labelling and describing their positive experiences to those close to them; Eisenberg, Cumberland & Spinrad, 1998). When a child grows up with a caregiver who is not only unresponsive but actively criticises or dismisses their emotions - known as an invalidating childhood environment (Linehan, 1993) - they often struggle to recognise and trust their own emotional experiences. Over time, they may come to believe their feelings are unacceptable or wrong, leading them to self-invalidate (Lambie & Lindberg, 2016).

This experience, if persistent throughout childhood and adolescence, has been shown to negatively impact the self and emotion regulation in adulthood. Individuals who have experienced invalidating childhood environments are more emotionally inhibitive (Caskey, 2022; Tani, Pascuzzi & Raffagnino, 2018) and reactive (Braden et al., 2021; Shenk & Fruzzetti, 2011) and also view expression of emotions more negatively (Haslam et al., 2012). Furthermore, experiencing invalidation is associated with individuals fluctuating between expression and inhibition (Selby et al., 2008). Additionally, emotional invalidation has also been associated with other dispositional traits such as low self-esteem (i.e. Neff & McGehee, 2010) and adult attachment anxiety (Gonçalves et al., 2021), with them both impacting emotional security. These findings suggest that emotionally invalidating environments appear to shape how individuals regulate and express their emotions, highlighting emotion regulation as a likely mechanism through which early invalidation shapes interpersonal functioning.

There has been growing literature on the impact emotional invalidation has on relationships. Research on invalidation and close relationships have primarily explored more negative relational processes or outcomes, such as dysfunction, conflict or interpersonal difficulties (Selby et al., 2008; Brandão, 2024; Elzy, Keaton, Bogus & Raymond, 2024). The previous chapter extends this by exploring a specific interpersonal process (i.e., forgiveness), but this chapter explores how emotional invalidation in childhood impacts more positive relational experiences, especially an emotionally motivated one. Emotional expression, such as the sharing of good news and positive life events, and feeling safe enough to do so is important for adult relationships.

Capitalisation

Sharing and celebrating significant moments in life is important in your close relationships (Gottman, 1999) whether that be getting a promotion at work, passing an important exam or reconnecting with an old friend. Most people report that they experience

more positive than negative events in their daily lives (Fredrickson & Losada, 2005; Gable & Reis, 2010). It is therefore important to explore the mechanisms behind if and why people share good events and experiences and their benefits. This process –the sharing of positive events or experiences and receiving a supportive response - is referred to as capitalisation (Langston, 1994). Capitalisation is a multi-faceted interpersonal process that involves not only the retelling of the event but also the partner's response and the disclosers perception of it. When the partner is seen to be responsive by the discloser of the positive event, this validates them and makes them feel understood (Gable & Reis, 2010).

Capitalisation attempts or engaging in capitalisation with a close other has many personal and relational benefits. Sharing positive events with others has been shown to be good for self-concept (e.g., increasing self-esteem; Timoney, 2015) and personal wellbeing (e.g., positive affect; Reis et al., 2010). Capitalisation has also been shown to increase the beneficial outcomes of the positive event for the discloser, above and beyond the reported positive effect of the event itself (Peters, Reis & Gable, 2018). Consequently, capitalisation is important for long-term romantic relationships (Gable et al., 2004) due to its mutually beneficial nature for both partner and discloser (Conoley et al., 2015; Hicks & Diamond, 2008; Monfort et al., 2014). It has been linked to intimacy, relational wellbeing in couples (Gable, Reis, Impett & Asher 2004), with it promoting emotional relational wellbeing (Gable & Reis, 2010).

Emotion and capitalisation

With capitalisation being an emotionally expressive process (Overall et al., 2020), there was reason to believe that emotional invalidation in childhood would influence this. There are circumstances where or reasons why people might not feel free to capitalise due to the costs associated, for example when they anticipate unsupportive or dismissive responses. Research

has shown that when this is evident, individuals may down-regulate through suppression of the positive emotion (Greenaway & Kalokerinos, 2017). In relation to capitalisation, individuals who have experienced emotional invalidation may be less likely to share emotions due to fears they will not be understood, similar to their experiences in childhood (Rogers, 1959), as such inhibiting or having a negative view of sharing emotion (Linehan, 1993). Having a positive attitude towards emotional expression is important for relationships, as it negates the belief that emotions should be kept under control and that they will be rejected, something that people with a history of emotional invalidation do not feel or believe (Haslam et al., 2012). As such, they may also exhibit more negative impressions of their own disclosure, due having more negative beliefs about emotions (Ceylan & Koç, 2026) and maladaptive emotional functioning (Ford et al., 2011), therefore feeling more negatively about their disclosure.

Additionally, those that have a history of emotional invalidation are more likely to experience negative affect as well as a longer, more intense duration in said emotional state, characteristics of emotional reactivity (Shenk & Fruzzetti, 2011). As capitalisation requires to share positive emotion and has been associated with positive affect (Gable et al., 2004), those with this experience in childhood may struggle to disclose to a close other due to not being able to trust their emotions (Eisenberg et al., 1998) and a worry that their positive emotion will not be received well. Furthermore, those with a history of invalidation have reduced positive reactivity (Shenk & Fruzzetti, 2011), and as such may not feel like their positive news is worth sharing.

Furthermore, one key aspect of capitalisation is the expectation that there is a responsive and enthusiastic partner. With the process and benefits of capitalisation being reciprocal, it is important to explore not only how people who have been invalidated

capitalise but also whether others capitalise with individuals who have been invalidated. Past research has shown that emotions greatly influence partners perception of the relationship (Bloch, Haase & Levenson, 2014) with people being less likely to share positive emotions when there might be a possibility that the receiver will not view it as supportive (MacGregor & Holmes, 2011). When exploring specific individual differences that influence whether people will capitalise with them, studies have shown that people who perceive a close other as having low self-esteem are less likely to enthusiastically capitalise with them (MacGregor & Holmes, 2011; MacGregor, Fitzsimons & Holmes, 2013), thus negatively impacting the relationship (Smith & Reis, 2012). Similarly, insecurely attached are less likely to perceive their partner to be responsive during capitalisation (Shallcross et al., 2011).

Due to this, we believed that emotional invalidation could also influence perceptions of others, as this history also influences how people respond to emotions (Hope & Chapman, 2019; Ford et al., 2011) and how they behave in their close relationships (e.g., Lombardo, Waters & Elzy, 2023). Knowledge of another person's emotional history might make you less likely to capitalise with them due to worries about them being less responsive as they are shown to be more reluctant to express emotion (Sauer & Baer, 2009). Similarly, we believed that knowledge of someone else's emotional invalidation would also impact one's perceptions of the disclosure, leading to more negative evaluations (i.e., discomfort) due to wanting to protect them from emotional discomfort and not contribute to their feelings of insecurity (Exline & Lobel, 1999).

Chapter overview

The invalidating environments children grow up in shape how they understand and navigate their emotions in adulthood (Linehan, 1993). Prior research both in the field and the previous chapter has predominantly examined the negative interpersonal outcomes of

childhood emotional invalidation (e.g., relationship dysfunction; Selby et al., 2008). Engaging in emotional expression is important as it fosters trust and connection with others (Johnson, 1996), something that positive prosocial behaviours rely on. Not being able to capitalise or having a reluctance to do so can pose an issue as it disrupts this, lessens relationship satisfaction and may negatively influence the perception of the partner (e.g., MacGregor, Fitzsimons & Holmes, 2013). Due to capitalisation ultimately being an emotional sharing experience, there was reason to believe emotional invalidation would disrupt the process, due to the dysregulation created from this upbringing. Those who have histories of emotional invalidation are more likely to have a negative attitude towards emotional expression (Haslam et al., 2012) and consequently may struggle to feel safe enough to disclose their feelings due to fears of rejection. Furthermore, emotional invalidation in childhood can lead people to be more emotionally reactive (i.e., less positive affect; Shenk & Fruzzetti, 2011) and therefore may be less willing to disclose positive news. Due to the reciprocal nature of capitalisation, there was reason to believe that knowing someone has experienced emotional invalidation would negatively impact disclosure due to anticipation that they would be less responsive to you as they are shown to be more reluctant to express emotion (Sauer & Baer, 2009).

Across four studies (three cross-sectional and one experimental), we explored the association between emotional invalidation in childhood and capitalisation as well as impressions of the disclosure. In Study 4 and 5, we used cross-sectional mediation analyses to test for indirect effects of emotional inhibition, emotional reactivity and attitudes towards emotional expression when sharing positive news with a close other (i.e., best friend or romantic partner). Specifically, we predicted that if emotional invalidation led to more emotion inhibition and negative attitudes towards emotional, people may be less likely to share positive news with a close other. This may be due to wanting to keep positive feelings

suppressed and feeling like there would be consequences to expressing positive emotions. Additionally, if emotional invalidation led to greater emotional reactivity, individuals may also be less likely to share positive news with a closer other. This is because high emotional reactivity causes individuals to have more intense negative emotions and less positive emotion, therefore they may not feel strongly about sharing positive emotion.

In Study 6, we predicted that when individuals were presented with a description of someone being invalidated in childhood, they were less likely to capitalise with them. This was in comparison to people who were shown a description of someone being validated in childhood. We believed that knowledge of this emotional vulnerability might have the connotation of them not being able to handle positive emotion and thus the discloser might anticipate a less responsive or supportive response and therefore be less inclined to capitalise with them. Finally, Study 7 aimed to explore this further but in the context of a close other (i.e., romantic partner). We predicted that individuals who perceived their partner to have experienced greater emotional invalidation by their close others (e.g., parents, friends) would be less likely to capitalise with said romantic partner. Across all four studies, we predicted that one's own emotional invalidation in childhood and knowledge of someone else's emotional invalidation in childhood would predict more negative impressions of the disclosure.

All studies reported in this chapter received approval from the University of Essex Ethics Sub-committee 3. The analytic strategy for each study was pre-registered and can be found on the project repository on AsPredicted (AsPredicted; <https://aspredicted.org/7ztx-z5p8.pdf>; <https://aspredicted.org/zm9s2c.pdf>; <https://aspredicted.org/49ed83.pdf>; <https://aspredicted.org/mb9aw7.pdf>).

Study 4

In Study 4, we tested whether emotional invalidation in childhood influenced capitalisation with a close other, and whether emotion inhibition, emotional reactivity and attitudes towards emotional expression mediated this association.

Method

Participants

Two hundred and two participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 22.77$, $SD = 4.979$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and April 2023. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, 27 were excluded from analyses for incomplete responses, and an additional 33 were excluded from analyses following coding responses of capitalisation letter because of not following the instructions (e.g., they left the question blank, their answers did not relate to the question). The final sample was 141 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 141 participants should have provided 80% power to detect a minimum effect size of $f^2 = .056$ (G*Power v.3.1.9.7).

The majority of participants were women (79%; 21% men), white (56%; 23% Asian, 11% Black; 6% Mixed ethnicity), straight (77%; 2% gay/lesbian, 18% bisexual; 3% not listed) and in monogamous relationships (93%; 4% consensually non-monogamous; 3% other). Those that were in a romantic relationship had been for 2.42 years on average

($SD=3.40$) and most were exclusively dating/in a committed relationship (45%; 33% single; 14% casually dating; 4% engaged; 4% married).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender, relationship status). Next, participants were asked to describe a recent personal accomplishment, followed by measures of emotional invalidation in childhood, emotion inhibition, emotional reactivity and attitudes towards emotional expression. Participants were then asked to reflect on the positive experience they disclosed at the beginning of the study and to write a letter to their partner (romantically attached participants) or best friend (single participants) telling them about the positive experience. Finally, all participants were thanked for their participation and fully debriefed. Table 7 presents the descriptive statistics for Study 4.

Table 7 - Descriptive statistics and correlations for Study 4

	1	2	3	4	5	6
1. Emotional Invalidation	-	-.01	.29***	-.11	.30***	.48***
2. Capitalisation		-	-.14	-.15	.07	-.15
3. Emotion Inhibition			-	-.31***	.08	.64***
4. Positive Reactivity				-	-.11	-.33***
5. Negative Reactivity					-	.20*
6. Attitudes Towards Emotional Expression						-
M	2.37	5.13	3.61	3.61	3.44	2.58
SD	.87	.99	1.26	.71	.85	.67
Scale Range	1-5	1-7	1-7	1-5	1-5	1-5

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Emotional Invalidation in Childhood. Emotional invalidation in childhood was measured using the 14-item ($\alpha = .936$) Invalidating Childhood Environment Scale (ICES; adapted from Mountford, Corstorphine, Tomlinson & Waller, 2007), adapted to refer to both parents rather than each caregiver individually (e.g., “When I was anxious, my parents ignored this.”; 1 = never, 5 = all the time). Items were averaged after being reverse coded, with higher scores reflecting greater emotional invalidation in childhood.

Capitalisation. Capitalisation was measured using methodology taken by MacGregor & Holmes (2011). Participants were asked to take a moment to think about a recent personal accomplishment (e.g., doing well on a test, being recognised at work) and to write down what the positive experience was in a couple of words. Afterwards, they were asked to write a letter to their partner (romantically attached individuals) or their best friend (single individuals) telling them about the positive experience they previously identified.

Emotion Inhibition. Emotion inhibition was measured using the four⁴ expressive suppression items ($\alpha = .784$) from the 10-item Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; e.g., “I keep my emotions to myself.”; 1=strongly disagree, 7= strongly agree). Items were averaged and higher scores reflect greater emotional inhibition.

Positive and Negative Emotional Reactivity. Participants completed a measure of emotional reactivity using the Perth Emotional Reactivity Scale – Short form (Preece, Becerra & Campitelli, 2019). This is an 18-item scale assessing individual differences in emotional reactivity, specifically activation, intensity and duration (1= very unlike me, 5=very like me; e.g., “When I am joyful, I tend to feel it very deeply.”, “If I am upset, I feel it more intensely than everyone else.”). This scale measures reactivity to positive and negative

⁴ Participants completed the entire 10-item scale, however we only focused on the suppression subscale as we had no a priori hypotheses as to the association between cognitive reappraisal, emotional invalidation in childhood and capitalisation.

emotions separately. Items were averaged across items of the same valence to create subscales of positive reactivity ($\alpha = .856$) and negative emotional reactivity ($\alpha = .896$), collapsing across the domains of activation, intensity, and duration. Higher scores reflect greater positive and negative emotional respectively.

Attitudes towards Emotional Expression. Participants completed a measure of attitudes towards emotional expression using a 20-item scale by Joseph, Williams, Irwing & Cammock (1994) which assesses beliefs and behaviours regarding emotional expression (1= disagree very much, 5=agree very much). The measure consists of four subscales: beliefs about meaning (sign of weakness; $\alpha = .870$; e.g., “It is shameful for a person to display his or her weaknesses.”), behavioural style (bottle up; $\alpha = .843$; e.g., “I don’t feel comfortable showing my emotions.”), beliefs about expression (keep in control; $\alpha = .833$; e.g., “I think you should always keep your feelings under control.”) and beliefs about consequences (social rejection; $\alpha = .774$; e.g., “I think other people don’t understand your feelings.”). Higher scores reflect a greater negative attitude towards emotional expression.

Impressions of disclosure. Participants were asked to rate their impressions of the positive disclosure using three items (e.g., “I think I really conveyed how positive the news was”; 1= strongly disagree, 7= strongly agree) and their feelings relating to writing about the positive event (e.g., uncomfortable, happy; 1= not at all, 5= extremely).

Analytic Strategy

Across all four studies, two coders rated the extent to which participants emphasised the positivity of their good news in the email with four items on a 7-point Likert scale (1 = not at all, 7 = a great deal): “overall, how positive is the email?”; “overall, how much does the person mention topics other than the good news that they chose to write about?” (reverse-scored); “to what extent does the person express excitement about their good news?”; and,

“to what extent does the person express their good news in a cool and calm way, with little emotion?” (reverse-scored). The internal consistency of the four coded items was assessed separately for each coder. The coding scheme demonstrated good internal consistency for Coder 1 ($\alpha = .784$) and Coder 2 ($\alpha = .680$). Ratings from each coder were averaged across the 4-items to create an aggregate capitalisation index. This coding scheme was taken from a paper by MacGregor & Holmes (2011), which was followed exactly, other than asking participants to write a letter as opposed to an email.

Results

Interrater reliability estimates and their 95% confidence intervals were calculated using SPSS (version 30) based on a mean rating ($k=2$), consistent agreement, 2-way mixed effects model. Interrater reliability was moderate, $ICC(2,1) = .70$, 95% CI [.58, .78], $p < .001$, indicating an acceptable threshold for consistency between raters based on the classification standards by Koo and Li (2016).

We first tested the hypothesis that emotional invalidation in childhood would be associated with capitalisation with a close other, using linear regression when controlling for relationship target (partner, $n = 94$; best friend, $n = 47$). Contrary to predictions, childhood emotional invalidation was not significantly associated with capitalisation, $b = .002$, $t(140) = .016$, $p = .987$, 95% CI [-.192, 1.95]. When not controlling for the target of the capitalisation attempt, childhood emotional invalidation was still not significantly associated with capitalisation $b = -.008$, $t(140) = -.084$, $p = .933$, 95% CI [-.197, .181]. Model coefficients are shown below in Table 8. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Table 8 - Model coefficients predicting capitalisation for Study 4

Predictors	Dependent Variable	
	Capitalisation	
	<i>b</i>	<i>t</i>
Emotion Invalidation	.002	.016
Relationship Target	-.092	-.511

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Impressions of disclosure

We then explored people's impressions of their capitalisation attempt with their close other and emotional invalidation using linear regression. Specifically, we explored whether emotional invalidation was associated with how individuals felt their positive disclosure was portrayed and their emotions surrounding this (e.g., happy, uncomfortable). Emotional invalidation was not significantly associated with how positively individual's felt they conveyed their news, whether they thought they got the message across and whether their close other would have understood they were glad about the event or news based on what they included in their capitalisation letter (Table 9).

Table 9 - Model coefficients for impressions of capitalisation for Study 4

Predictor	Dependent Variables					
	Conveyed positive news		Got message across		Understood they were glad	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	.080	.517	-.094	-.795	-.052	-.519

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

When asked how they felt while writing about their positive event, emotional invalidation was only associated with negative emotions: feeling uncomfortable, uneasy and bothered (Table 10). There was no significant effect associated with feeling happy, excited or pleased when writing about the positive event to their close other (Table 11).

Table 10 - Model Coefficients for Negative Emotions on Capitalisation Study 4

Predictor	Dependent Variables					
	Uncomfortable		Uneasy		Bothered	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	.275	2.102*	.379	3.184**	.269	2.603**

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 11 - Model coefficients for positive emotions on capitalisation for Study 4

Predictor	Dependent Variables					
	Happy		Excited		Pleased	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	-.096	-.916	-.067	-.539	-.101	-.864

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

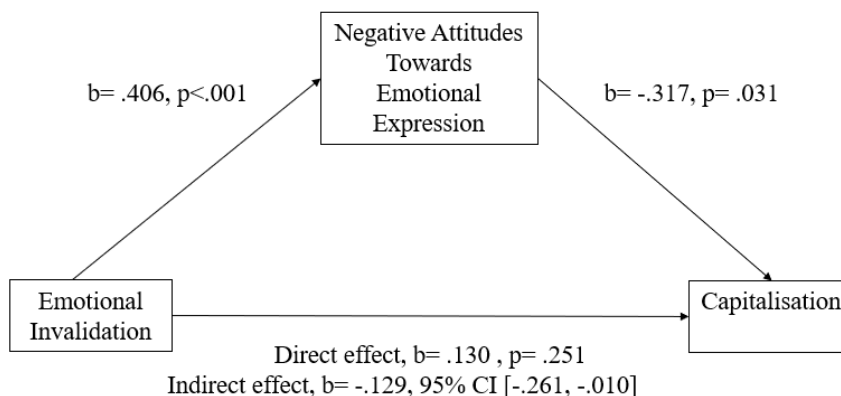
Indirect effects of emotional expression.

Given these results, we next tested our hypothesis that emotional invalidation may influence capitalisation due to an indirect effect of experiences with emotional expression.

We tested for the indirect effects of emotional inhibition, positive and negative emotional reactivity, and attitudes towards emotional expression using Hayes PROCESS Model 4 (Hayes, 2017). The indirect effects were tested using the percentile bootstrapped estimation approach with 10,000 samples (Shrout & Bolger, 2002).

Only the indirect effect of negative attitudes towards emotional expression ($\beta = -.129$, $SE_{bootstrapped} = .063$, $CI_{bootstrapped} [-.261, -.010]$) was significant. This suggests that people relatively higher in emotional invalidation are more likely to experience negative attitudes towards emotion expression, which made them less likely to capitalise with their close other (Figure 7).

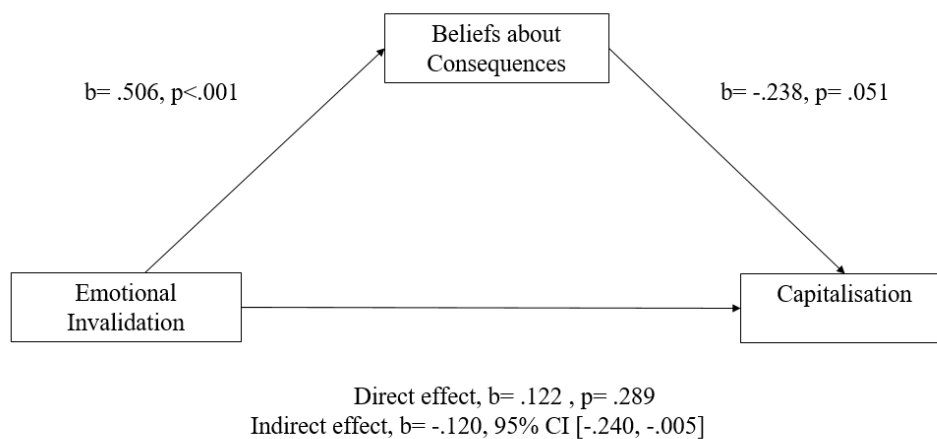
Figure 7 - Indirect association between emotional invalidation and capitalisation via negative attitudes towards emotional expression



As an exploratory analysis, we were interested in whether a specific subscale of attitudes towards emotional expression explained the association between emotional invalidation in childhood and capitalisation. We had a post hoc hypothesis that beliefs about the negative social consequences – particularly the fear of being rejected- would be the most likely driver of the results. This is because of the turbulence associated with a history of emotional invalidation and vulnerability of sharing good news through a capitalisation attempt.

Of the subscales, only the indirect effect of beliefs about consequences (social rejection; $\beta = -.120$, $SE_{bootstrapped} = .060$, $CI_{bootstrapped} [-.240, -.005]$), was significant. This suggests that those that were emotionally invalidated in childhood were more likely to have negative beliefs about the consequences of emotional expression (e.g., other people don't understand their feelings), which made them less likely to capitalise with their close other, (Figure 8). The indirect effects of emotion inhibition, positive and negative reactivity were not significant (see Appendix B).

Figure 8 - Indirect association between emotional invalidation and capitalisation via beliefs about consequences



Study 5

Study 4 did not provide support for our main hypothesis but did show that there was a clear indirect effect that could explain the association between emotional invalidation and capitalisation. In Study 5 we therefore directly replicated Study 4 in a novel sample to illustrate the reliability of our findings across multiple studies. We did this as direct replications are encouraged to be routinely included in psychological science in order to provide accumulated evidence for reliable effects (e.g., Simons, 2014; Zwaan et al., 2018).

Method

Participants

Two-hundred and ninety-three participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 21.13$, $SD = 3.588$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and May 2023. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, 47 were excluded from analyses for incomplete responses, eight for failing the integrity question, 35 when coding responses of capitalisation letter because of not following the instructions (e.g., they left the question blank, their answers did not relate to the question), for a final sample of 203 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 203 participants should have provided 80% power to detect a minimum effect size of $f^2 = .039$ (G*Power v.3.1.9.7).

The majority of participants were women (78%; 20% men; 2% other gender identity), white (67%; 13% Asian; 9% Black; 6% mixed ethnicity), heterosexual (71%; 3% gay/lesbian, 24% bisexual; 2% not listed) and in monogamous relationships (89%; 4% consensually non-monogamous; 7% other). Almost half of the participants were single (45%), with a similar percentage of participants exclusively dating/in a committed relationship (44%; 7% casually dating; 1% engaged; 3% married). Those that were in a relationship had been for 1.96 years on average ($SD=2.327$). Table 12 presents the descriptive statistics for Study 5.

Table 12 - Descriptive statistics and correlations for Study 5

	1	2	3	4	5	6
1. Emotional Invalidation	-	-.17*	.29***	-.23***	.38***	.50***
2. Capitalisation		-	-.16*	.19**	-.09	-.23***
3. Emotion Inhibition			-	-.27***	.17*	.68***
4. Positive Reactivity				-	-.15*	-.34***
5. Negative Reactivity					-	.31***
6. Attitudes Towards Emotional Expression						-
M	2.36	4.89	3.86	3.51	3.64	2.71
SD	.83	.95	1.25	.76	.81	.71
Scale Range	1-5	1-7	1-7	1-5	1-5	1-5

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Results

Interrater reliability estimates and their 95% confidence intervals were calculated using SPSS (version 30) based on a mean rating ($k = 2$), consistent agreement, 2-way mixed effects model. Interrater reliability was moderate, $ICC(2,1) = .72$, 95% CI [.63, .79], $p < .001$, indicating an acceptable threshold for consistency between raters based on the classification standards by Koo and Li (2016).

We used the same analytic strategy as Study 4, regressing capitalisation on emotional invalidation, either with a romantic partner or best friend (Table 13). Unlike in Study 4, our hypothesis was supported, with emotional invalidation in childhood significantly predicting capitalisation with a close other $b = -.191$, $t(205) = -2.389$, $p = .018$, 95% CI [-.350, -.033]. When we controlled for the target of the capitalisation event (i.e., romantic partner, $n = 112$, or best friend, $n = 91$), the effects were still significant $b = -.199$, $t(205) = -2.492$, $p = .014$,

95% *CI* [-.357, -.042]. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Table 13 - Model coefficients predicting capitalisation for Study 5

Predictors	Dependent Variable	
	Capitalisation	
	<i>b</i>	<i>T</i>
Emotion Invalidation	-.199	-2.492*
Relationship Target	.206	1.550

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Impressions of disclosure

Unlike in Study 4, emotional invalidation in childhood significantly predicted two of the three impressions of disclosure measures, such that people were less likely to think that they ‘got the message across’ that they were happy with what happened $b = -.245$, $t(205) = -2.359$, $p = .019$, 95% *CI* [-.451, -.040] and less likely to think that their close other would understand from what they told them that they were glad it happened $b = -.187$, $t(205) = -2.211$, $p = .028$, 95% *CI* [-.353, -.020] as shown in Table 14. However, feeling like they conveyed the positive news was not significant, $b = -.196$, $t(205) = -1.536$, $p = .126$, 95% *CI* [-.448, .056].

Table 14 - Model coefficients for impressions of capitalisation for Study 5

Predictor	Dependent Variables					
	Conveyed positive news		Got message across		Understood they were glad	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	-.196	-1.536	-.245	-2.359*	-.187	-2.211*

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Like Study 4, when asked how they felt while writing about their positive event, emotional invalidation was associated with negative emotions: feeling uncomfortable, uneasy and bothered (Table 15). However, unlike Study 4, emotional invalidation negatively predicted positive emotions (i.e., feeling happy, excited or pleased) when writing about the positive event to their close other (Table 16).

Table 15 - Model Coefficients for negative emotions on capitalisation for Study 5

Predictor	Dependent Variables					
	Uncomfortable		Uneasy		Bothered	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	.315	2.832**	.393	3.845***	.176	1.998*

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 16 - Model coefficients for positive emotion on capitalisation for Study 5

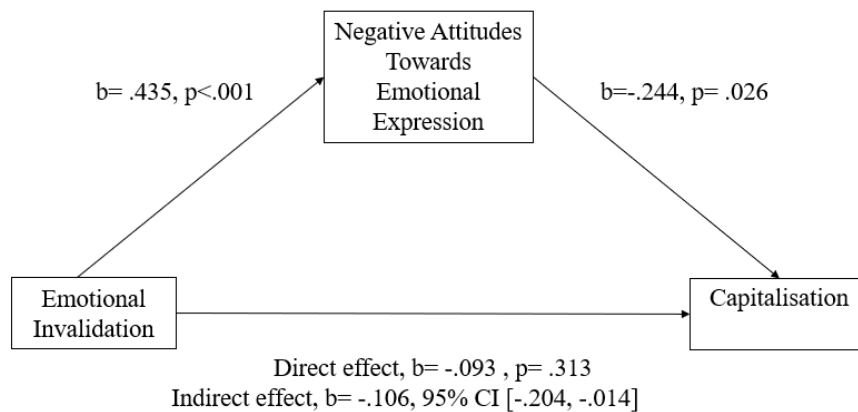
Predictor	Dependent Variables					
	Happy		Excited		Pleased	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotional Invalidation	-.184	-2.125*	-.275	-2.907**	-.176	-2.058*

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Indirect effects of emotional expression

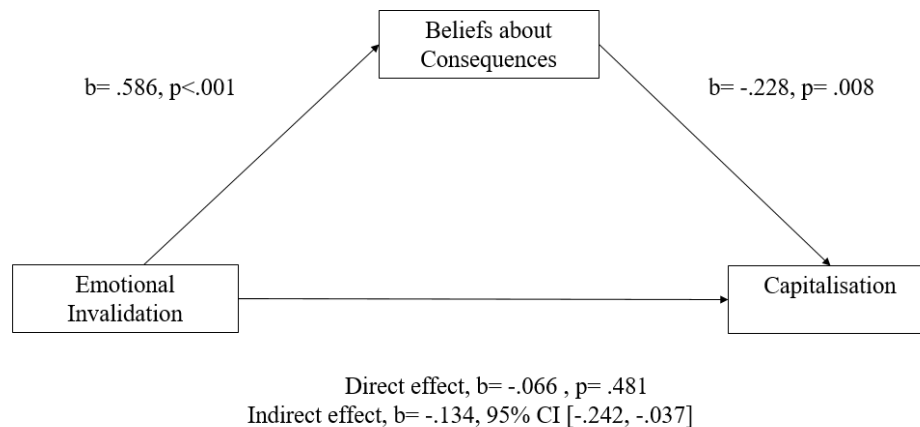
Consistent with Study 4, we found that the association between emotional invalidation in childhood and capitalisation was also mediated by the indirect effects of negative attitudes towards emotional expression ($\beta = -.106$, $SE_{bootstrapped} = .048$, $CI_{bootstrapped} [-.204, -.014]$). This showed that people relatively higher in emotional invalidation were more likely to experience negative attitudes towards emotion expression, which made them less likely to capitalise with their close other (Figure 9).

Figure 9 - Indirect association between emotional invalidation and capitalisation via negative attitudes towards emotional expression



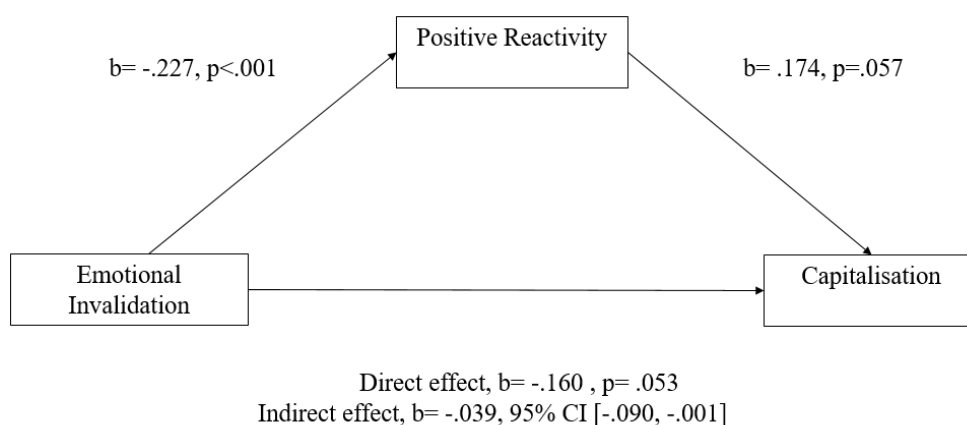
Like Study 4, we explored whether the indirect effects of negative beliefs about the consequences of emotional expression were replicated and could explain the association between emotional invalidation in childhood and capitalisation. Similarly, the indirect effect of beliefs about consequences (i.e., social rejection; $\beta = -.134$, $SE_{bootstrapped} = .052$, $CI_{bootstrapped} [-.242, -.037]$), predicting capitalisation were significant. This showed that those that were emotionally invalidated in childhood were more likely to have negative beliefs about the consequences of emotional expression (e.g., others will reject them if they are upset), which made them less likely to capitalise with their close other (Figure 10).

Figure 10 - Indirect association between emotional invalidation and capitalisation via beliefs about consequences



Additionally, unlike Study 4, the association between emotional invalidation in childhood and capitalisation was also mediated by positive reactivity ($\beta = -.039, SE_{bootstrapped} = .023, CI_{bootstrapped} [-.090, -.001]$). This showed that people relatively higher in emotional invalidation were less likely to experience intense, long-lasting positive emotional responses, which made them less likely to capitalise with their close other (Figure 11). All non-significant models are available in Appendix B.

Figure 11 - Indirect association between emotional invalidation and capitalisation via positive reactivity



Study 6

Studies 4 and 5 showed support for the emotional mechanisms linking emotional invalidation and capitalisation, which raised the question of whether people are willing to capitalise with someone known to have this background. Because capitalisation is a reciprocal process that depends on perceiving a partner as responsive, we next examined whether people would capitalise with someone they know has a history of emotional invalidation. In Study 6, we tested whether knowing whether someone had been emotionally invalidated by their parents in childhood influenced the likelihood of sharing good news with them.

Method

Participants

Five-hundred and eighty-three participants aged 18 and older consented to take part in the study. Participants ($M_{age} = 42.49$, $SD = 14.84$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January and April 2023. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, seven were excluded for failing the integrity question, 285 were excluded from analyses for incomplete responses, 37 when coding responses of the capitalisation letter because of not following the instructions (e.g. they left the question blank, their answers did not relate to the question), for a final sample of 254 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 254 participants should have provided 80% power to detect a minimum effect size of $f^2 = .031$ (G*Power v.3.1.9.7).

The majority of participants were women (90%; 9% men, 1% other gender identity), white (92%; 4% Asian, 3% Black; 1% Mixed ethnicity), straight (87%; 2% gay/lesbian, 11% bisexual) and in monogamous relationships (94%; 2% consensually non-monogamous; 4% other). Participants had been in a relationship for 15.57 years on average ($SD=12.87$) and the highest percentage of participants were married (51%; 22% single; 2% casually dating; 17% exclusively dating/in a committed relationship; 8% engaged).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender, relationship status). Next, participants were asked to describe a recent personal accomplishment (e.g. doing well on a test, being recognised at work). Then participants were asked to read a response by a ‘participant’ describing a time they shared good news with their parents. Participants were shown one of two conditions: someone’s past experience being *invalidated* by their parents (experimental) or being *validated* by their parents (control). In the invalidation condition ($n= 126$), participants read a vignette by a ‘participant’ named Ash, who said the following when asked to describe a time they told their parents about something good that had happened to them:

“I can’t really think of a specific example, but I always felt like my parents just never felt the same way I felt. When I was sad, they weren’t sad. When I was happy, they weren’t happy. It’s like they didn’t want to hear what I have to say or just wanted me to get over it and accept it and move on. Really, my parents made me feel that my emotions were not important and not “ok”. ”

In the validation condition ($n= 128$), participant read a similar vignette by a ‘participant’ called Ash, who said the following when asked to describe a time they told their parents about something good that had happened to them:

“I can’t really think of a specific example, but I always felt like my parents always felt the same way I felt. When I was sad, they were sad. When I was happy, they were happy. They always wanted to hear what I have to say and never wanted me to feel pressured to just “get over” how I was feeling or accept it and move on. Really, my parents made me feel that my emotions were very important and ok to experience.”

After reading either the invalidating or validating vignette, participants were asked to reflect on the positive experience they disclosed at the beginning of the study and to write a letter to the participant telling them about their positive experience. Finally, all participants were thanked for their participation and fully debriefed.

Results

Interrater reliability estimates and their 95% confidence intervals were calculated using SPSS (version 30) based on a mean rating ($k = 2$), consistent agreement, 2-way mixed effects model. Interrater reliability was moderate, $ICC(2,1) = .60$, 95% CI [.48, .69], $p < .001$, indicating an acceptable threshold for consistency between raters based on the classification standards by Koo and Li (2016).

We hypothesised that participants in the invalidating condition (i.e., presented with someone who had an invalidating experience with their parents) would be less likely to capitalise in their letter than those in the validating condition where the person they were presented with had had a validating experience with their parents. An independent samples t -test was conducted to compare the capitalisation scores of individuals who were presented with the invalidation vignette (Group 1) and those who were presented with validation vignette (Group 2). Levene’s test was conducted to assess the equality of variances for the two groups. The results of Levene’s test, $F(1, 252) = 6.052$, $p = .015$, show that the assumption of homogeneity of variances was met.

The results showed that there was a significant difference in capitalisation scores between those that were in the invalidation conditions ($M = 3.90$, $SD = 1.179$) and those in the validation condition ($M = 4.70$, $SD = .968$; $t(252) = 5.931$, $p < .001$; Table 17). The mean difference in scores was .60, with a 95% confidence interval ranging from .536 to 1.069. Thus, consistent with our hypotheses, when people were asked to capitalise with someone who had previously experienced invalidation by their parents, they were less likely to share their good news than with someone who had been validated by their parents (Table 17).

Table 17 - T-test comparisons of capitalisation scores for Study 6

	Invalidation		Validation		$t(252)$	p	Cohen's d
	M	SD	M	SD			
Capitalisation	3.90	1.179	4.70	.968	5.931	<.001	.74

Impressions of disclosure

We explored people's impressions of their capitalisation attempt and emotional invalidation using an independent t-test, comparing the impression of disclosure scores of people who were presented with the invalidation group and those who were presented with the validation group. There was no significant difference between groups in regard to the impression of their disclosure (see Table 18).

Table 18 - T-test comparisons of Impressions of Disclosure Scores for Study 6

	Invalidation		Validation		$t(252)$	p	Cohen's d
	M	SD	M	SD			
Conveyed positive news	5.14	1.51	5.28	1.33	.776	.220	.097
Got message across	5.65	1.36	5.93	1.17	1.755	.080	.221
Understood they were glad	5.79	1.35	5.99	1.20	1.29	.198	.162

Next, we explored whether emotional invalidation was associated with how individuals felt about their positive disclosure (e.g., happy, uncomfortable). An independent samples t-test was conducted to compare the impression of disclosure scores of individuals who were presented with the invalidation vignette (Group 1) and those who were presented with the validation vignette (Group 2). There was no significant difference between both groups for any either negative or positive emotions in reference to the capitalisation attempt (Table 19 & 20).

Table 19 - T-test comparisons of Negative Emotions Scores for Study 6

	<i>Invalidation</i>		<i>Validation</i>		<i>t</i> (252)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Uncomfortable	2.19	1.32	2.05	1.20	-.909	.364	-.114
Uneasy	1.96	1.16	1.80	1.06	-1.12	.264	-.141
Bothered	1.97	1.24	1.80	1.05	-.192	.235	-.150

Table 20 - T-test comparisons of Positive Emotions Scores for Study 6

	<i>Invalidation</i>		<i>Validation</i>		<i>t</i> (252)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Happy	3.72	1.01	3.86	.97	1.104	.270	.139
Excited	3.12	1.20	3.20	1.31	.483	.630	.061
Pleased	3.72	1.20	3.86	1.14	.932	.352	.117

Study 7

The aim of this study was to directly replicate the effects from Study 6, which involved perceptions of a stranger, but with a romantic partner. Because, unlike a stranger, people know their partners, therefore we could not manipulate their childhood histories of

invalidation. Instead, we asked people to rate how much invalidation they believe their partners received from their families and close others. As such, we tested whether knowing your partner had experienced invalidation by those close to them would influence the likelihood of an individual sharing good news (i.e. capitalise) with said partner.

Method

Participants

Two-hundred and thirty-eight participants aged 18 and older and who were in committed romantic relationships consented to take part in the study. Participants ($M_{age} = 24.62$, $SD = 9.195$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook) between January 2023 to March 2024. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, 12 were excluded from analyses for not passing the integrity question, 66 for incomplete responses, 8 for not specifying they were actually single, 75 when coding responses of capitalisation letter because of not following the instructions (e.g. left the question blank, did not relate to the question, for a final sample of 177 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 177 participants should have provided 80% power to detect a minimum effect size of $f^2 = .045$ (G*Power v.3.1.9.7).

The majority of participants were women (84%; 15% men; 1% other gender identity), white (54%; 28% Asian; 12% Black; 3% Mixed ethnicity), heterosexual (73%; 2% gay/lesbian, 23% bisexual; 2% not listed) and in monogamous relationships (98%; 2% consensually non-monogamous; 1% other). Most of the participants were in committed

relationships (74%; 10% casually dating; 4% engaged; 12% married), with the average relationship length being 3.952 years ($SD=7.436$).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender; relationship status). Next, participants were asked to describe a recent personal accomplishment. Then participants answered a measure of perceived invalidation of emotion, where they were asked to reflect on their partner's relationships with others and how their close others react to their partner's emotions. After those measures were complete, participants were asked to reflect on the positive experience they disclosed at the beginning of the study and to write a letter to their partner telling them about their positive experience. Finally, all participants were thanked for their participation and fully debriefed. Descriptive statistics and the model coefficient are shown in Table 21.

Table 21 - Descriptive Statistics and Model Coefficients for Study 7

	M	SD	β
1. Partner's Perceived Emotional Invalidation	1.852	.763	-
2. Capitalisation	5.114	1.032	.015

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Partner's perceived emotional invalidation. We used a modified version of the 10-item Perceived Invalidation of Emotion Scale (PIES; Zielinski & Veilleux, 2018) to assess how people believe their partner's close others respond to their partner's emotions ($\alpha = .914$; 1 = almost never, 5 = almost always). Items of this scale included statements such as "When my partner shares how they're feeling, others seem like they don't want to hear what they

have to say” and were averaged with higher scores reflecting more perceived partner emotional invalidation by close others.

Results

Interrater reliability estimates and their 95% confidence intervals were calculated using SPSS (version 30) based on a mean rating ($k=2$), consistent agreement, 2-way mixed effects model. Interrater reliability was good, $ICC(2,1) = .76$, 95% CI [.67, .82], $p < .001$, indicating an acceptable degree of consistency among raters, based on the classification standards by Koo and Li (2016).

Using linear regression, we tested whether people who believed their partners experienced more emotional invalidation by their families would be less likely to capitalise when sharing good news. However, contrary to our predictions, perceived emotional invalidation of a partner was not significantly associated with own capitalisation attempt, $b = .015$, $t(176) = .145$, $p = .885$, 95% CI [-.187, .217]. As such, those that believed their romantic partner had experienced emotional invalidation by their close others were no more or less likely to capitalise with them. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Impressions of disclosure

We then explored people’s impressions of their capitalisation attempt and their partner’s perceived emotional invalidation using linear regression. Specifically, we explored whether their partner’s perceived emotional invalidation was associated with how individuals felt their positive disclosure was portrayed and their emotions surrounding capitalising (e.g., happy, uncomfortable). There was no significant association between their partner’s perceived emotional invalidation and their impression of their own disclosure (Table 22).

Table 22 - Model Coefficients for Impressions of Capitalisation for Study 7

Predictor	Dependent Variables					
	Conveyed positive news		Got message across		Understood they were glad	
	<i>B</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Partner's Perceived Emotional Invalidation	-.022	-.223	.014	.168	-.038	-.607

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

When exploring how people felt about their capitalisation attempt (both positively and negatively), there was only one significant association. We found that perceiving ones partner to have been emotionally invalidated by their close others predicted feeling bothered while writing their positive event $b = .203$, $t(176) = 2.154$, $p = .033$, 95% *CI* [.017, .388]. There were no other significant effects (see Table 23 & 24).

Table 23 - Model Coefficients for Negative Emotions on Capitalisation for Study 7

Predictor	Dependent Variables					
	Uncomfortable		Uneasy		Bothered	
	<i>b</i>	<i>T</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Partner's Perceived Emotional Invalidation	.224	1.883	.198	1.843	.203	2.154*

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 24 - Model Coefficients for Positive Emotions on Capitalisation for Study 7

Predictor	Dependent Variables					
	Happy		Excited		Pleased	
	<i>b</i>	<i>T</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Partner's Perceived Emotional Invalidation	-.172	-1.816	-.094	-.805	-.105	-1.142

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Discussion

The emotional environment we grow up in can contribute to difficulties in emotional processing in adulthood. In particular, the literature surrounding emotional invalidation in childhood has shown to be linked to emotion inhibition, reactivity and attitudes towards expression. Having a positive attitude towards emotional expression is important for relationships, as it negates the belief that emotions should be kept under control and that they will be rejected. One important relational process is capitalisation, as defined by the disclosure of positive events with the hope of an enthusiastic, supportive response (Langston, 1994) and is linked to long, satisfying relationships (Gable et al., 2004). The benefits of capitalisation have been widely explored, with the process requiring individuals to be vulnerable with self-disclosure of positive emotions. In relation to capitalisation, individuals who have experienced emotional invalidation may be less likely to share these positive emotions due to fears they will not be understood, similar to their experiences in childhood. Perceptions of others is also important when deciding whether to capitalise, with individual differences (e.g., self-esteem) having shown to decrease the likelihood of doing this due to worries about emotional discomfort or not receiving a supportive response (MacGregor &

Holmes, 2011). As such, people may be less likely to capitalise with others they believe to have experienced emotional invalidation.

In the first two correlational studies in this chapter, we found inconsistent support for our hypotheses. In Study 4, past experiences of emotional invalidation did not directly influence the likelihood of someone sharing good news with them (i.e., capitalising with them), but we did find support in Study 5. In Study 5, our hypothesis was supported, with emotional invalidation in childhood significantly predicting capitalisation with a close other, irrespective of the target of the capitalisation. In both studies, the indirect effect of emotional invalidation in childhood was consistently associated with less capitalisation with a close other when mediated by negative attitudes towards emotional expression (Study 4 & 5) and could be further explained by the indirect effects of fear of social rejection. This included specific beliefs about consequences such as “others do not understand their feelings” and that people will reject them if they upset them.

When exploring capitalisation in the context of someone else, we found support that perceptions of someone’s emotional invalidation in childhood influenced the likelihood of sharing good news with that person (Study 6). However, in the context of a romantic partner, there was no support for whether perceiving them to have been invalidated would influence sharing positive news with them (Study 7). This may have been due to methodological constraints in how partner emotional invalidation was measured, as the findings demonstrated a floor effect (i.e., much lower perceptions of partner invalidation compared to when people are reflecting on their own experiences).

Implications

Despite these inconsistencies, the findings from this chapter have added to the growing literature on how emotional invalidation impacts emotion (e.g., Caskey, 2022; Shenk

& Fruzzetti, 2011; Haslam et al., 2012) but specifically attitudes towards emotional expression. We extended this research by illustrating it in a prosocial behavioural context (i.e., capitalisation). We also attempted to extend findings on how individual differences (e.g., low self-esteem, attachment anxiety) might influence whether others will capitalise with you, by looking at it in the context of emotional invalidation. In Study 6, we found that when there is knowledge of someone's vulnerability, in this case emotional invalidation, then others are less likely to capitalise with them. When you compare this to existing literature, this is supported by people capitalising less with those they know have low self-esteem (Smith & Reis, 2012) and who are insecurely attached (Shallcross et al., 2011). However, this was not extended by our findings in Study 7, when exploring emotional invalidation of a romantic partner and whether they capitalised with them.

Despite some of hypotheses not being supported, our findings still have important implications for the understanding of how negative experiences in childhood translates into adult relationships. A lot of previous literature has focused on the direct impact of one's own emotional invalidating experiences on their own emotion regulation, which we have supported with our findings on attitudes towards emotional expression. It has only been in recent years that there has been literature exploring the impact these experiences have interpersonally, usually in the form of difficulties, dysregulation and low relationship quality (Selby et al., 2008; Brandão, 2024; Elzy, Keaton, Bogus & Raymond, 2024). In this chapter, we have focused on a specific important interpersonal process that is reliant on emotion but related to more positive outcomes. This has extended on the previous chapter that explored how emotional invalidation impacts overcoming a more negative relational process, further providing support for the consequences it has on different parts of interpersonal life. Emotional expression is important as it fosters trust and connection (Johnson, 1996). Not being able to capitalise or having a reluctance to do so can pose an issue as capitalisation is

linked to more relationship satisfaction, greater trust and intimacy (Gable et al., 2004). This research strongly highlights the stunting nature of emotional invalidation as it shows that previous emotional histories influence present-day responsiveness to positive events.

Limitations and future directions

One limitation of this work is that all studies asked participants to capitalise in the same way. Participants were asked to write a letter about a personal accomplishment, with there being no control for the nature of accomplishment or event. Someone's recent accomplishment could have been the day before; some may have been weeks prior, with timeframe being shown to influence the emotional saliency of experiences (Phelps & Sharot, 2008). This makes it difficult to compare or attribute to the variables we have as people's experiences and their description of their positive experience may vary. A potential future direction could focus on a specific the type of positive event or experience such as relational successes (e.g., a major milestone).

Furthermore, there are concerns about the ecological validity of the capitalisation task, as letter-based responding may lack the nuance from capitalising in person. This may be due to the absence of nonverbal characteristics typically associated with responsiveness in capitalisation (e.g., tone of voice, facial expressions). Future research would benefit from using the existing methodology in conjunction with examining capitalisation in a more naturalistic context (e.g., observed couple interactions) thus exploring behavioural indicators, combining both attitudes and actual behaviour that capture momentary responses to partners' positive disclosures in daily life.

Another methodological issue was the self-report and retrospective nature of both emotional invalidation in Study 4 & 5 and perceived emotional invalidation in Study 7. The first two studies in this chapter relied on recall of experiences when they were a young child

or adolescent. This methodology is susceptible to inaccuracies and biased recall, but prior research has shown that adults are reasonably accurate at salient childhood experiences (Brewin, Andrews & Gotlib, 1993). Additionally, this research is not the first to use retrospective measurements of emotional invalidation in adult populations (e.g., Mountford et al., 2007).

Furthermore, Study 7 methodology relied on the perception of the individual and their interactions of their close partner with others. We had reason to believe this was the case due to findings showing that people's judgements of their partners traits are reasonably accurate (e.g., self-esteem, attachment anxiety; Cameron, 2007; Lemay & Dudley, 2011) which are related constructs to emotional invalidation. In hindsight, individuals might not be around their partner when interacting with their family enough to observe evidence of invalidation. Despite this limitation and lack of support for the hypothesis in Study 7, Study 6 has highlighted that perceptions of another person's emotional invalidation are important (i.e., if you believe someone has experienced invalidation) and consequently how you interact with them. As such, it would be interesting to use more robust methodology such as dyadic studies whereby individuals report their own invalidation, and we can explore actor/partner effects.

In terms of future directions, other individual differences may also moderate this association, including as attachment style, relationship quality or partner responsiveness. Attachment anxiety and avoidance may strengthen this association, as individuals who expect rejection or express a discomfort with intimacy may be especially likely to withhold positive disclosures following emotionally invalidating childhood experiences. In contrast, high relationship quality and greater perceived partner responsiveness may buffer this association by increasing feelings of safety and reducing the anticipated costs of emotional expression.

Even with the limitations of the studies in this chapter, these studies contribute meaningful understanding of how negative emotional experiences in childhood shapes individual's attitudes towards self-disclosure and engagement in positive relational processes.

Conclusion

Being able to share good news with loved ones plays an important role in personal and interpersonal wellbeing (e.g., Gable & Reis, 2010). However, not everyone grows up in an environment that allows them to feel safe enough to express their emotions or one that promotes positive self-disclosure. The research in this chapter demonstrates that people who are emotionally invalidated are less likely to capitalise with a close other, in part due to beliefs about the consequences of sharing emotions and are also less likely to have other people capitalise with them. The studies in this chapter support the role emotional environments in childhood has on emotional expression and consequently relational processes in adulthood that are reliant on expression such as capitalisation.

Chapter 4: The consequences of invalidating emotional experiences in childhood on expressed and perceived gratitude in romantic relationships

Abstract

Emotionally invalidating childhood environments where a child has their feelings dismissed, criticised, or trivialised tends to lead to negative relational outcomes in adulthood as demonstrated in previous chapters. One relational outcome that has not been explored is gratitude, an important prosocial behaviour that is related to better relationship satisfaction (Gordon, Arnette & Smith, 2011) and more responsive and committed relationships (Gordon et al., 2012). There are circumstances in which individuals may not engage in gratitude (i.e., insecurely attached) due to their fear of rejection (Ishaq & ul Haque, 2015) and negative expectations of their partner (Overall et al., 2015). With emotional invalidation being linked to avoidance of intimacy and anxiety over abandonment in adulthood (e.g., Gonçalves et al., 2021), we proposed that adult insecure attachment may help explain how emotionally invalidation in childhood could negatively influence the gratitude experience. Across two correlational and one dyadic study ($N_{total} = 1,326$), we explored whether individuals who have grown up in emotionally invalidating environments feel grateful for and express gratitude to their romantic partner (Study 8) and how they perceive their partners gratitude for them (Study 9). Furthermore, we explored dyadic effects of expressing gratitude with a partner in relation to emotional invalidation (Study 10). We found there was no direct association between emotional invalidation in childhood and feeling grateful for or expressing gratitude to a romantic partner (Study 8 & Study 10), but we did find direct support for emotional invalidation and perceptions of your partners felt gratitude for you (Study 9). Indirect effects of insecure adult attachment are discussed.

Introduction

General overview

The emotional environment children grow up in is important as it contributes to the development of emotion (Leerkes & Bailes, 2019) which consequently shapes how they behave (e.g., Dutra Cipriano Lara, et al., 2022). One area of interest is the negative experience of invalidation from caregivers which is defined as the dismissal and trivialisation of thoughts, feelings and behaviours (Linehan, 1993). Research has shown that experiencing an emotionally invalidating environment negatively impacts perceptions and interpretations of emotional experiences (Eisenberg et al., 1998; Fruzzetti et al., 2005) and emotional awareness (Lambie & Lindberg, 2016), that then can lead to emotional difficulties in adulthood (e.g., Krause, Mendelson & Lynch, 2003). Growing literature has looked at the consequences of this experience on romantic relationships, specifically negative outcomes such as relationship dysfunction (Selby et al., 2008) and interpersonal difficulties (Gonçalves et al., 2021), but not in the context of relationship maintenance behaviours.

As with emotional invalidation, insecure attachment has negative consequences that lead into adulthood (Hazan & Shaver, 1987) and shapes how we behave in and view our romantic relationships (Simpson & Rholes, 2017). Extensive literature has shown that current experiences in intimate relationships in terms of avoidance of intimacy and anxiety over abandonment has been linked with lower engagement with many prosocial behaviours (Mikulincer, Shaver & Slav, 2006), with the consequences on gratitude being of particular importance (e.g., Park et al., 2019). Gratitude can be defined as an emotion that derives from the recognition that a positive experience occurred because of someone else's responsive behaviour (McCullough, Emmons & Tsang, 2002; Algoe, 2012) and inherently a relational process about connection (Algoe, 2012). Feeling grateful and expressing it is important for social relationships, specifically romantic relationships as it is linked to relationship

maintenance behaviours (Lambert & Fincham, 2011). Similarly, an important aspect of romantic relationships is feeling like you receive gratitude from your partner, either through your perceptions of how they feel or your judgement of their expression. Viewing your partner as feeling grateful for you has been shown to be important for overall relationships (Gordon et al., 2012).

As emotional invalidation and its impact on gratitude has not yet been explored, we proposed that adult insecure attachment may help explain this association. As such, we predicted that individuals who experience greater emotional invalidation in childhood are less likely to express gratitude with their romantic partner, and these individuals are less likely to perceive gratitude from their partner. We believe this will be partly explained through insecure adult attachment, specifically anxiety and avoidance.

Emotional invalidation

Our upbringing is vital for shaping how we recognise others' emotions and express our own (Morris, Criss, Silk & Houlberg, 2017), particularly due to learning from our caregivers how to do so (Denham, 2007). The emotional environment which we grow up in can influence the extent of our emotional awareness and understanding (Lambie & Lindberg, 2016; LoBue & Ogren, 2022) and feeling of emotional security by being able to trust one's emotions (Eisenberg et al., 1998), things that are important for socio-emotional development. Negative experiences during childhood, specifically invalidating childhood environments, can cause difficulties with emotion, such as poorer emotion regulation (Hope & Chapman, 2019), negative attitudes towards emotional expression (Haslam et al., 2012) and intolerance of emotional states (Sturrock, Francis & Carr, 2009).

Because invalidating environments include dismissive, unreliable caregivers, we would expect it to contribute to a person's underlying working model of self and others.

These working models have an important impact on how people navigate their interpersonal worlds (Pietromonaco & Barrett, 2000). As such, receiving a lack of response to one's emotions from caregivers may make it difficult to recognise someone else's responsive behaviour to your own actions, as they already learn they cannot trust their emotions (Eisenberg et al., 1998), and have more negative core beliefs (Ford et al., 2010). Research has shown that negative emotional environments can influence the development of less secure attachments with caregivers due to having a less responsive emotional environment (Fonagy et al., 2002; Smith, Calkins & Keane, 2006). Furthermore, research has supported that this can transfer to adulthood, with emotional invalidation being associated with avoidance of intimacy and anxiety over abandonment, as characterised as insecure adult attachment (e.g., Gonçalves et al., 2021).

Recent literature has found that emotional invalidation directly influences interpersonal relationships as it has been linked to more relationship conflict (Elzy, Keaton, Bogus & Raymond, 2024), lower intimacy (Valdivieso, 2021) and can lead to interpersonal dysfunction (Lombardo, Waters & Elzy, 2023), beyond the clinical domain it was originally researched in (e.g., BPD; Selby et al., 2008). We believed it was important to explore different relational processes, specifically prosocial behaviours like Chapter 2 and 3, and how emotional invalidation may influence this.

Gratitude

Acknowledging positive things in our life is important, especially if due to another person's kind action. Gratitude can be defined as an emotion that derives from the recognition that a positive experience occurred because of someone else's responsive behaviour (McCullough, Emmons & Tsang, 2002; Algoe, 2012) and has gained increasing attention over the years. There are many benefits of engaging in gratitude, both personally

and interpersonally. Gratitude has been linked to a variety of positive outcomes such as own wellbeing (Nezlek, Newman & Thrash, 2017), positive affect and resilience (Klibert et al., 2019) and reduction in stress (O’Leary & Dockray, 2015). Generally, gratitude is important for relationships as it requires you to think of your partner or relationship in a positive light. Romantically, experiencing gratitude has been linked to relationship satisfaction (Algoe, Gable & Maisel, 2010), closeness (Murray & Hazelwood, 2011) and relationship maintenance (Gordon et al., 2012).

Relationships are interdependent and partners have the power to play a role in each other’s lives, with them being defined as the mutual dependence and influence exerted by both partners (Kelley et al., 1983). Gratitude is an inherently relational process, and partner’s emotional experiences are known to influence their partner (Schoebi & Randall, 2015; Butler & Randall, 2013). As such, there is an important distinction between the actuality (i.e., one’s expression) and the perception (i.e., beliefs about their partner) in regard to gratitude as research shows that felt and expressed emotions relate differently to relationship outcomes (Geist & Gilbert, 1996). Felt gratitude and appreciation are related to marital satisfaction (Gordon, Arnette & Smith, 2011) and more responsive and committed relationships (Gordon et al., 2012). Alternatively, expression specifically has shown to increase communal strength in the relationship (Lambert et al., 2010), relationship stability (Gable, Gonzaga & Strachman, 2006) as well as positive perceptions of a partner (Lambert & Fincham, 2011).

As gratitude is a positive emotional experience (Watkins et al., 2006) that can be reliant on feeling or communication of this positive emotion (Fredrickson, 2004), this can be something that people who have histories of emotional invalidation might find daunting. There are several barriers that could contribute to the gratitude experience, for example individuals tend to underestimate how much others will like their expression of gratitude (Kumar & Epley, 2018) and that communicating gratitude might be exposing as those that

engage with this implicitly admit they are dependent on their close other (Wood, Froh & Geraghty, 2010).

Individual differences such as insecure adult attachment have been shown to contribute to the feeling and expression of gratitude, as well as the perception from a partner. Insecurely attached individuals are more likely to perceive others as emotionally unavailable and unresponsive (Pietromonaco & Barrett, 2000) and have overall negative views of their romantic partner if they themselves are avoidantly attached (Bartholomew, 1990). Fundamentally, if you perceive someone to be unresponsive to your needs as historically you have had close others be dismissive and critical of your emotions, you're going to struggle to experience or feel this positive emotion towards them, maybe due to being unable to label said emotion (Musser et al., 2018). In addition, you may feel less willing to actually engage in the expression of gratitude due to fear of rejection or negative core beliefs, as already shown in both emotionally invalidated and insecurely attached individuals (Hazan & Shaver, 1987; Ford et al., 2011).

In using dyadic study designs, which is important due to the interdependent nature of relationships, research has found that a person's gratitude is not just related to their own positive outcomes, but their partners too (e.g., Park et al., 2019). This supports the need to go beyond independent self-report and for considering both perspectives of a couple in the same model. In reference to a romantic partner and their gratitude towards the perceiver, research has shown that overall recipients tend to underestimate their partner's gratitude (Tissera et al., 2023), with those that deem it as being less sincere showing a decrease in relationship satisfaction (Leong et al., 2020). As with individual differences regarding expressed gratitude, those that are insecurely attached also have negative expectations about their partner's action or behaviour (Baldwin et al., 1993). These individuals tend to view their partners as less supportive (Collins & Feeney, 2004) and lack confidence in their partner's

love (Collins, 1996). Those that have a history of emotional invalidation may not anticipate prosocial intentions or behaviours from a partner due to feeling like they cannot fulfil their emotional needs, as experienced during childhood (Rogers, 1959). Overall, if you have this perception about your partner's behaviour, you are not going to believe that they will be feel or show appreciation or gratitude for you.

Chapter overview

It is clear that poor emotional experiences in childhood, specifically emotionally invalidating environments (Linehan, 1993), strongly and negatively influence how we view and respond to emotional experiences in adulthood (Sauer & Baer, 2009; Haslam et al., 2012). These negative emotional environments can also influence the development of less secure attachments with caregivers due to having a less responsive emotional environment (Fonagy et al., 2002; Smith, Calkins & Keane, 2006), with it being associated with avoidance of intimacy and anxiety over abandonment in adulthood (e.g., Gonçalves et al., 2021).

Insecure adult attachment has been known to negatively influence a variety of relationship processes, with one area of interest being gratitude (Vollmann, Sprang & van den Brink, 2019), however the consequences of emotional invalidation are unknown. Gratitude requires closeness due to it being process reliant on positive emotion as shared from another person's kind action (McCullough, Emmons & Tsang, 2002; Algoe, 2012). Being on the giving and receiving end of gratitude contributes to positive relationship outcomes including long-term commitment and stability (e.g., relationship quality; Algoe, Fredrickson & Gable, 2013; Algoe, Haidt & Gable, 2008). There are circumstances in which individuals may not engage in gratitude (i.e., insecurely attached) due to their fear of rejection (Ishaq & ul Haque, 2015) and negative expectations of their partner (Overall et al., 2015). This is similar to individuals who have a history of emotional invalidation. Thus, emotional invalidation may

create a context in which people struggle to engage in this important relationship process, in conjunction with being insecurely attached.

In this chapter, we conducted three studies (two cross-sectional and one dyadic) to explore how emotional invalidation in childhood could influence expressed gratitude with a romantic partner, perceptions of a partner's gratitude and the overall gratitude experience between couples. In Study 8 & 9, using mediational analyses, we explored the indirect effects of adult insecure attachment, and whether this better explained the potential association between emotional invalidation and gratitude. In Study 10, we explored the dyadic effects (i.e., actor and partner effects) of emotional invalidation on expression of gratitude.

Specifically, we hypothesised that those who had experiences of emotional invalidation would be less likely to feel grateful for and express gratitude to their romantic partner, with this being partly explained by higher insecure adult attachment. We believed this would be due to worries of their partner being unavailable or unresponsive (Pietromonaco & Barrett, 2000), both as a result of experiencing that in childhood in an emotionally invalidating environment (Linehan, 1993) as well as the belief that manifests in insecurely attached individuals internal working model (Simpson & Rholes, 2017).

Similarly, we hypothesised that those with histories of emotional invalidation would be less likely to feel their partner was grateful or them or express gratitude to them. This was because both individuals with a history of emotional invalidation and those that are insecurely attached (i.e., avoidant of intimacy and anxious about abandonment) have negative perceptions of their close others or relationship (Overall et al., 2015; Selby et al., 2008), and as such may not feel appreciated by them. For Study 10, using APIM, we hypothesised actor effects of emotional invalidation on expression of gratitude such that greater emotional invalidation in childhood will be negatively associated when expressing gratitude about a romantic partner. Additionally, we predicted partner effects, such that greater emotional

invalidation will be associated with more negative expressions of gratitude from a romantic partner. As one's emotional experiences are known to influence their partner (Schoebi & Randall, 2015), we believed it would be of interest exploring the impact emotional experiences in childhood have not only on their own gratitude, but their partners too.

Study 8 and 9 analytic strategy was pre-registered, with Study 10 being pre-registered as part of a different study (Chapter 5). This can be found on the project repository on AsPredicted (AsPredicted; <https://aspredicted.org/4pj7rv.pdf>; <https://aspredicted.org/j5r45q.pdf>). All studies reported in this chapter received approval from The University of Essex Ethics Sub-committee 3.

Study 8

In Study 8, we tested whether emotional invalidation in childhood influenced gratitude towards a romantic partner in adulthood and examined whether this association was mediated by adult insecure attachment.

Method

Participants

One-thousand and forty-nine participants aged 18 and older, who were in committed romantic relationships and had sex with their current partner within the past 3 months consented to take part in the study. Participants ($M_{age} = 25.11$, $SD = 4.086$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook, Reddit) between February and June 2024. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, 445 were excluded from analyses for incomplete responses, for a final sample of 604 participants.

A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 604 participants should have provided 80% power to detect a minimum effect size of $f^2 = .013$ (G*Power v.3.1.9.7).

The majority of participants were women (93.2%; 5% men; 1.8% other gender identity), white (84.9%; 6.8% Asian; 2.2% Black; 4% Mixed ethnicity), heterosexual (65.9%; 2.3% gay/lesbian, 25.2% bisexual; 3.6% pansexual, 3% not listed) and in monogamous relationships (97.5%; 2% consensually non-monogamous; .5% other). Most of the participants were in committed relationships (81.6%; 1.2% casually dating; 7.6% engaged; 9.6% married), with the average relationship length being 3.46 years ($SD=3.328$).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender; relationship status) followed by measures of emotional invalidation in childhood and adult insecure attachment. Next, participants were asked to rate how grateful they were for their partner and how much they expressed their gratitude to their partner. Finally, participants were thanked for their participation and fully debriefed. Table 25 presents the descriptive statistics for Study 8.

Table 25 - Descriptive Statistics and Correlations for Study 8

	1	2	3	4	5
1. Emotional Invalidation	-	-.015	-.015	.250***	.301***
2.Felt Gratitude		-	.382***	-.070	-.401***
3.Expressed Gratitude			-	-.071	-.329***
4. Anxious Attachment				-	.234***
5. Avoidant Attachment					-
M	2.382	4.775	4.208	4.129	2.201
SD	.890	.510	.835	1.217	.997
Scale Range	1-5	1-5	1-5	1-7	1-7

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Emotional Invalidation in Childhood. Emotional invalidation in childhood was measured using the 14-item ($\alpha = .937$) Invalidating Childhood Environment Scale (ICES; Mountford, Corstorphine, Tomlinson & Waller, 2007), adapted to refer to both parents rather than each caregiver individually (e.g., “My parents would become angry if I disagreed with them.”; 1 = *never*, 5 = *all the time*). Items were averaged after being reverse coded, with higher scores reflecting greater emotional invalidation in childhood.

Gratitude towards partner. Participants rated their agreement with six statements related to their gratitude for their partner (adapted from Park et al., 2019). The six items were separated into two sub-scales: feeling gratitude towards a partner ($\alpha = .907$; e.g., "I feel grateful for my partner") and expressing gratitude towards a partner ($\alpha = .908$; e.g., "I tell my partner that I am grateful for them"; 1 = strongly disagree, 5 = strongly agree). Items were averaged within sub-scales, with higher scores reflecting greater gratitude towards a partner.

Adult insecure attachment. Participants rated their agreement with statements in the 12-item Experiences in Close Relationship Scale-Short Form (ECR-S; Wei et al., 2007) which explores the feelings of their current relationship. The scale includes two sub-scales: anxious attachment ($\alpha = .751$; e.g., “I do not often worry about being abandoned”) and avoidant attachment ($\alpha = .806$; e.g., “I find that my partner(s)/friend(s) don’t want to get as close as I would like.”; 1 = strongly disagree, 7 = strongly agree). Items were averaged within sub-scales, with higher scores reflecting greater anxious or avoidant attachment.

Results

We tested the hypothesis that emotional invalidation in childhood would be associated with a) feeling grateful for a partner and b) expressing gratitude towards a partner, when controlling for adult anxious and avoidant attachment using linear regression. Contrary to our hypotheses, we found that emotional invalidation was positively associated with feeling gratitude towards a partner, $b = .066$, $t(603) = 2.919$, $p = .004$, 95% CI [.022, .111], and positively associated with expressing gratitude towards a partner, $b = .089$, $t(603) = 2.323$, $p = .014$, 95% CI [.014, .165], when controlling for attachment as a covariate (Table 26).

When not controlling for adult attachment, childhood emotional invalidation was not significantly associated with feeling gratitude towards a partner, $b = -.009$, $t(603) = -.367$, $p = .714$, 95% CI [-.054, .037], and expressing gratitude towards a partner, $b = -.014$, $t(603) = -.357$, $p = .721$, 95% CI [-.089, .061], though the direction of the associations was negative as expected. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Table 26 - Model Coefficients Predicting Gratitude for Study 8

Predictors	Dependent Variables			
	Felt Gratitude		Expressed Gratitude	
	<i>b</i>	<i>T</i>	<i>B</i>	<i>t</i>
Emotion Invalidation	.066	2.919**	.089	2.323*
Anxious Attachment as Covariate	.001	.069	-.008	-.285
Avoidant Attachment as Covariate	-.223	-11.055***	-.298	-8.704***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The positive association between emotional invalidation and fel & expressed gratitude after controlling for attachment may indicate a suppression effect. Specifically, although emotional invalidation was associated with greater avoidance, which in turn was negatively associated with felt & expressed gratitude, controlling for avoidance specifically revealed a positive residual association between emotional invalidation and felt & expressed gratitude. This suggests that aspects of emotional invalidation that are independent of avoidance may be positively associated with gratitude.

Indirect effects of avoidant attachment

In order to understand whether the observed association between emotional invalidation and gratitude could be understood through differences in attachment, we tested for the indirect effects of adult anxious and avoidant attachment using Hayes PROCESS Model 4 (Hayes, 2017). The indirect effects were tested using the percentile bootstrapped estimation approach with 10,000 samples (Shrout & Bolger, 2002).

Both the indirect effects of avoidant attachment on felt gratitude ($\beta = -.076$, $SE_{bootstrapped} = .013$, $CI_{bootstrapped} [-.102, -.051]$) and avoidant attachment on expressed gratitude ($\beta = -.101$, $SE_{bootstrapped} = .018$, $CI_{bootstrapped} [-.138, -.069]$) were significant. People relatively higher in emotional invalidation were more likely to be avoidantly attached, which made

them less inclined to feel grateful for their partner and less likely to tell their partner they were grateful for them (Figure 12 & 13). The indirect effects of anxious attachment on felt and expressed gratitude were non-significant (Figures 14 & 15).

Figure 12 - Indirect association between emotional invalidation and felt gratitude via avoidant attachment

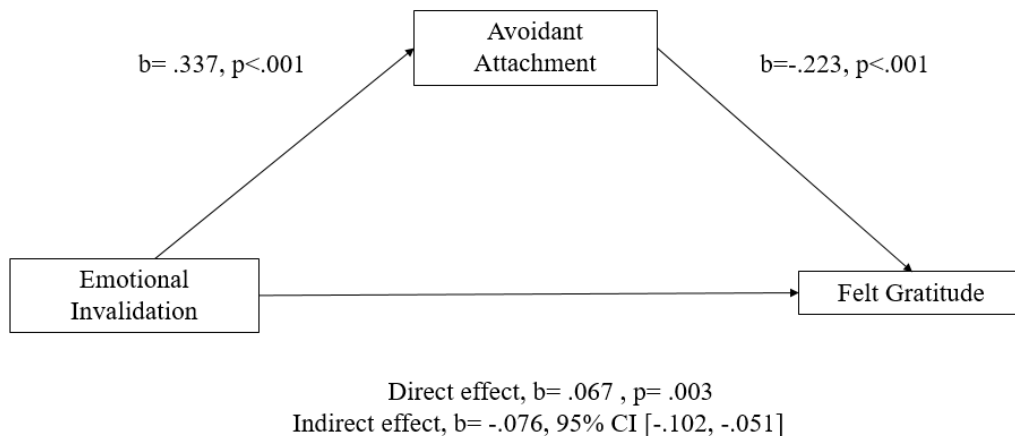


Figure 13 - Indirect association between emotional invalidation and expressed gratitude via avoidant attachment

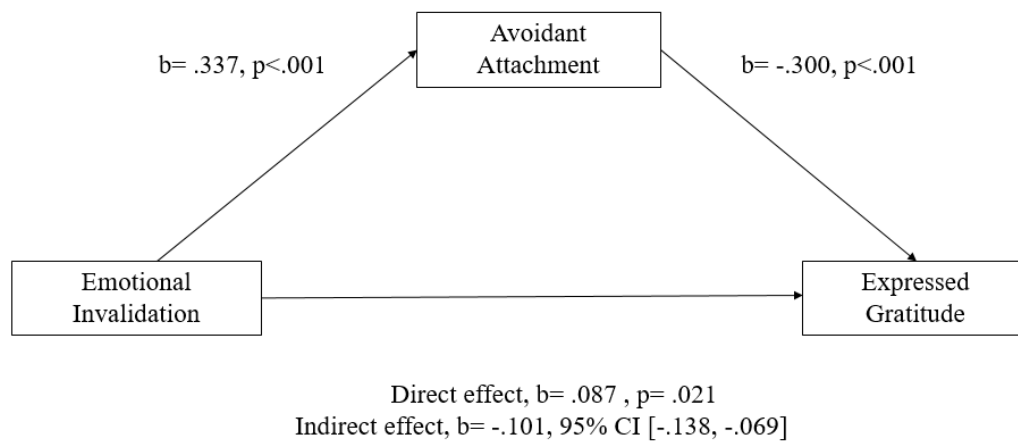


Figure 14 - Indirect association between emotional invalidation and felt gratitude via anxious attachment

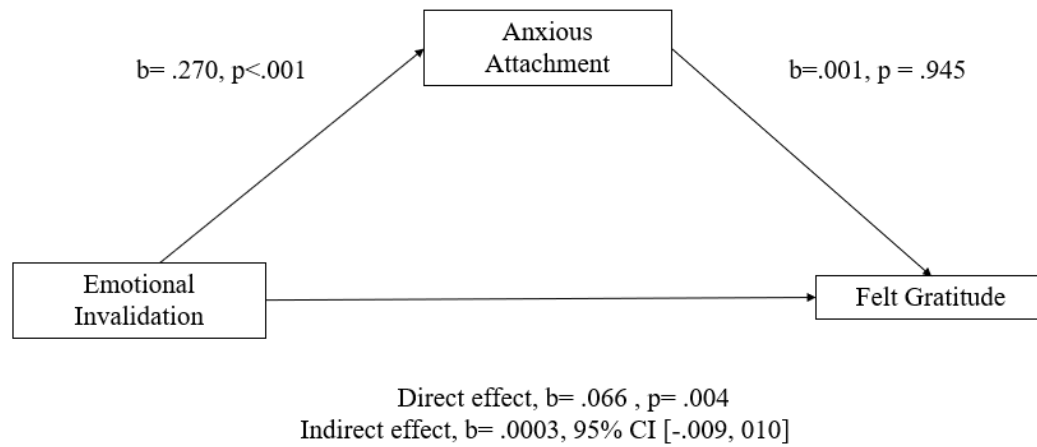
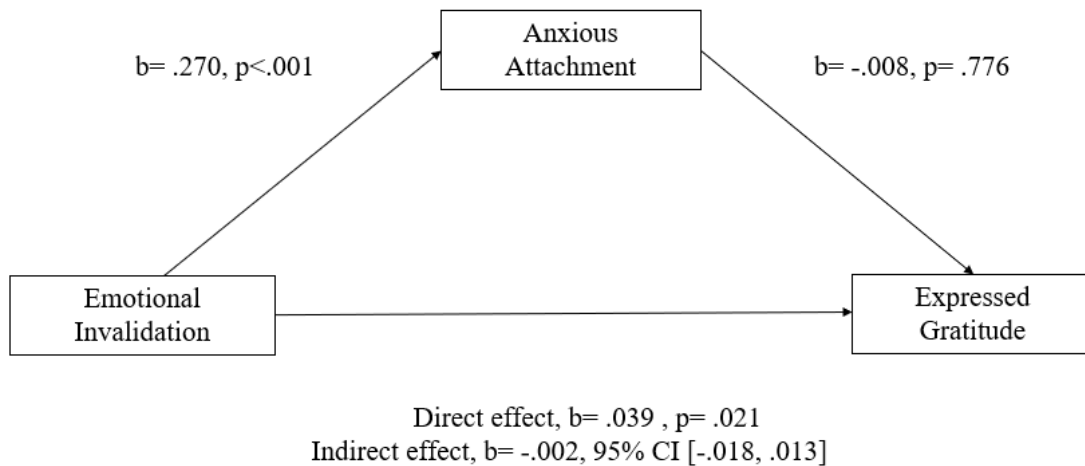


Figure 15 - Indirect association between emotional invalidation and expressed gratitude via anxious attachment



Study 9

In Study 9, we tested whether emotional invalidation in childhood influenced perceived gratitude from a romantic partner in adulthood and examined whether this association was mediated by adult insecure attachment.

Method

Participants

One-thousand and sixty-one individuals aged 18 and older, who were in committed romantic relationships and had sex with their current partner within the past 3 months consented to take part in the study. Participants ($M_{age} = 26.09$, $SD = 5.757$) were recruited from the departmental research participation subject pool, as well as via social media platforms (e.g., Facebook, Reddit) between February and June 2024. Participants who were eligible for course credit (e.g., psychology students in the department) received 0.5 credits for participating. All others were uncompensated volunteers. Of the eligible participants, 459 were excluded from analyses for incomplete responses, for a final sample of 602 participants. A sensitivity power analysis was conducted using G*Power to determine the minimum effect size that could be detected with the available sample. A sample of 602 participants should have provided 80% power to detect a minimum effect size of $f^2 = .013$ (G*Power v.3.1.9.7).

The majority of participants were women (91.7%; 6.3% men; 2% other gender identity), white (86.5%; 3.7% Asian; 2.2% Black; 5.3% Mixed ethnicity), heterosexual (63.6%; 2.2% gay/lesbian, 28.1% bisexual; 3.7% pansexual; 2.4% not listed) and in monogamous relationships (96.2%; 3.3% consensually non-monogamous; .5% other). Over half of the participants were in committed relationships (76.6%; 1.3% casually dating; 10.3% engaged; 11.8% married), with the average relationship length being 4.31 years ($SD = 4.622$).

Procedures

Eligible participants who consented to participating in the study were asked demographic questions (e.g., age, gender; relationship status) followed by measures of

emotional invalidation in childhood and adult insecure attachment. Next, participants were asked to rate how much they felt their partner was grateful for them and how much they believed their partner expressed gratitude towards them. Finally, participants were thanked for their participation and fully debriefed. Table 27 presents the descriptive statistics for Study 9.

Table 27 - Descriptive Statistics and Correlations for Study 9

	1	2	3	4	5
1. Emotional Invalidation	-	-.147***	-.025	.303***	.306***
2. Perceived Felt Gratitude		-	.674***	-.316***	-.482***
3. Perceived Expressed Gratitude			-	-.280***	-.301***
4. Anxious Attachment				-	.352***
5. Avoidant Attachment					-
M	2.444	4.297	3.796	3.971	2.204
SD	.904	.823	1.085	1.173	.972
Scale Range	1-5	1-5	1-5	1-7	1-7

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Perceived gratitude from partner. Participants rated their agreement with six statements related to their perceived gratitude from their partner (adapted from Park et al., 2019). The six items were separated into two sub-scales: feeling gratitude from a partner ($\alpha = .929$; e.g., "I feel like my partner is grateful for me") and perceived expression of gratitude from a partner ($\alpha = .945$; e.g., "My partner tells me they are grateful for me"; 1 = strongly disagree, 5 = strongly agree). Items were averaged within sub-scales, with higher scores reflecting greater perceived gratitude from a partner.

Results

We tested the hypothesis that emotional invalidation in childhood would be associated with a) perceived felt gratitude from a partner and b) perceived expression of gratitude from a partner, using linear regression controlling for adult anxious and avoidant attachment.

Contrary to our hypotheses, we found that childhood emotional invalidation was not significantly associated with perceived felt gratitude from a partner, $b = .035$, $t(601) = 1.013$, $p = .311$, 95% $CI [-.033, .103]$, but was positively associated with perceived expressed gratitude from a partner, $b = .147$, $t(601) = 2.992$, $p = .003$, 95% $CI [.050, .243]$, as shown in Table 28. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

When not controlling for adult attachment, childhood emotional invalidation was significantly associated with perceived felt gratitude from a partner, $b = -.134$, $t(601) = -3.636$, $p < .001$, 95% $CI [-.206, -.061]$, but was not significantly associated with perceived expressed gratitude from a partner, $b = -.031$, $t(601) = -.623$, $p = .533$, 95% $CI [-.127, .066]$. Model coefficients are shown below in Table 28.

Table 28 - Model Coefficients Predicting Gratitude for Study 9

Predictors	Dependent Variables			
	Perceived Felt Gratitude		Perceived Expressed Gratitude	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
Emotion Invalidation	.035	1.013	.147	2.992**
Anxious Attachment as Covariate	-.123	-4.556***	-.209	-5.437***
Avoidant Attachment as Covariate	-.365	-11.174***	-.289	-6.221***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The positive association between emotional invalidation and perceived felt & expressed gratitude after controlling for attachment may indicate a suppression effect. Specifically, although emotional invalidation was associated with greater anxiety and avoidance, which in turn was negatively associated with perceived felt & expressed gratitude, controlling for insecure attachment revealed a positive residual association between emotional invalidation and perceived gratitude. This suggests that aspects of emotional invalidation that are independent of anxiety and avoidance may be positively associated with perceived gratitude.

Indirect effects of anxious and avoidant attachment

Both the indirect effects of anxious attachment ($\beta = -.083$ $SE_{bootstrapped} = .016$, $CI_{bootstrapped} [-.116, -.054]$) and avoidant attachment on perceived felt gratitude ($\beta = -.134$, $SE_{bootstrapped} = .023$, $CI_{bootstrapped} [-.182, -.091]$) were significant. People relatively higher in emotional invalidation during childhood were more likely to be anxiously and avoidant attached in adulthood, which made them less inclined to feel like their partner was grateful for them (Figure 16 & 17).

Figure 16 - Indirect association between emotional invalidation and perceived felt gratitude via anxious attachment

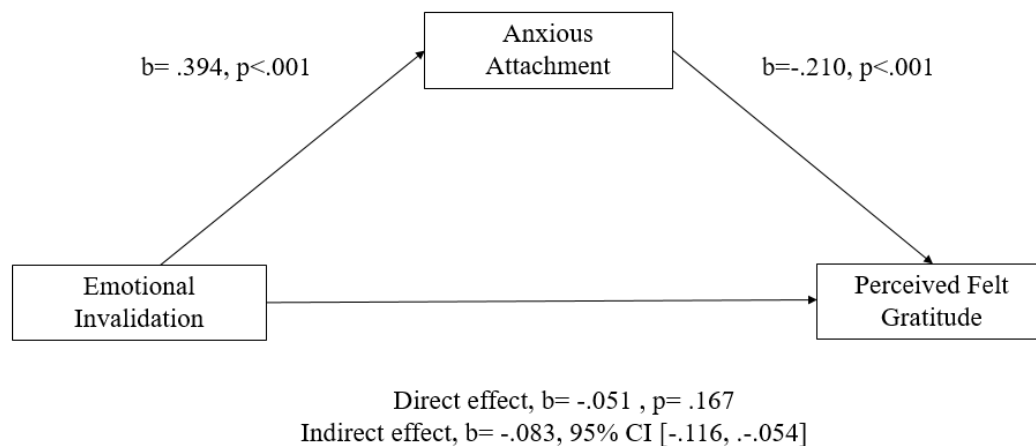
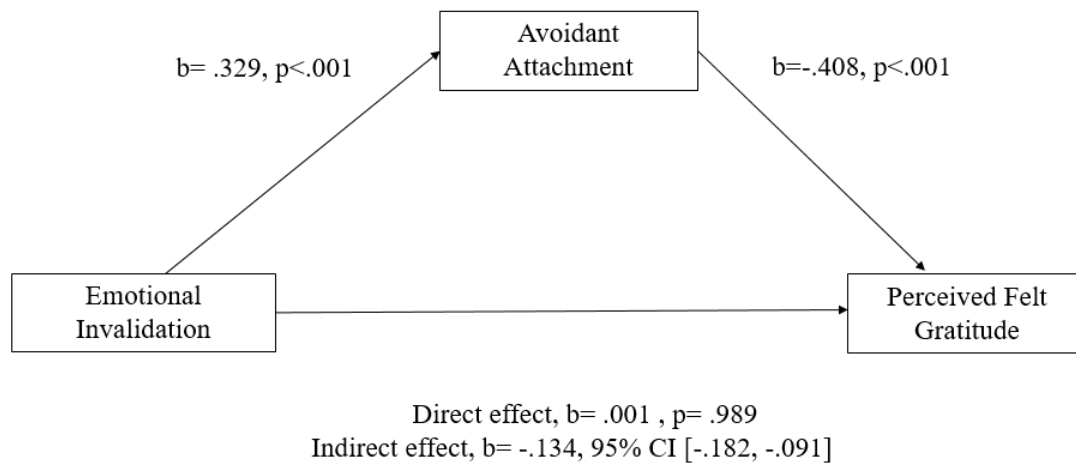


Figure 17 - Indirect association between emotional invalidation and perceived felt gratitude via avoidant attachment



Additionally, the indirect effects of anxious attachment ($\beta = -.109, SE_{bootstrapped} = .022, CI_{bootstrapped} [-.155, -.069]$) and avoidant attachment on perceived expressed gratitude ($\beta = -.119, SE_{bootstrapped} = .024, CI_{bootstrapped} [-.169, -.075]$) were significant. People relatively higher in emotional invalidation in childhood were more likely to be anxiously and avoidant attached in adulthood, which made them less likely to think their partner told them they were grateful for them (Figure 18 & 19).

Figure 18 - Indirect association between emotional invalidation and perceived expressed gratitude via anxious attachment

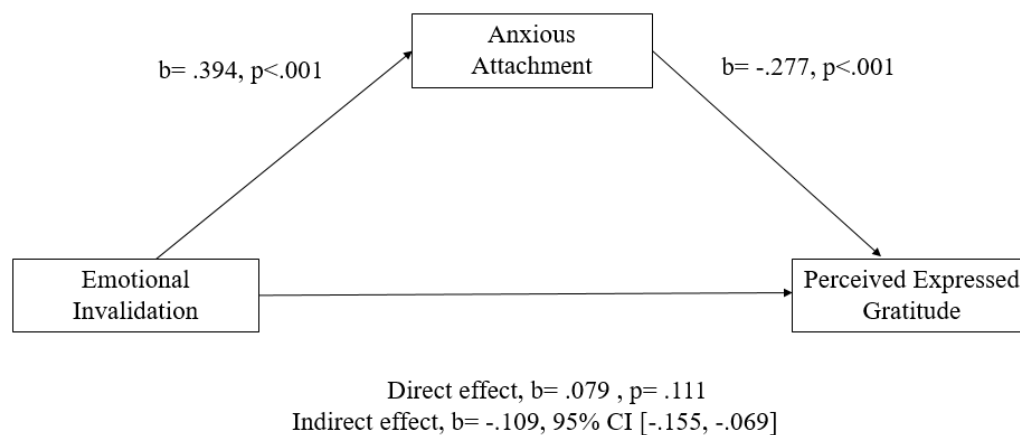
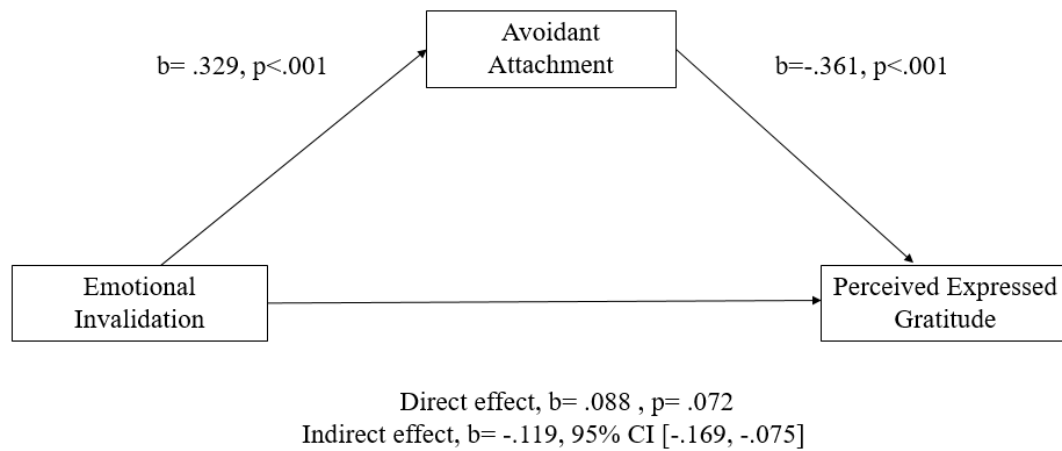


Figure 19 - Indirect association between emotional invalidation and perceived expressed gratitude via avoidant attachment



Study 10

To further explore the findings from Study 8 & 9, we investigated the dyadic effects between romantic couples of expressing gratitude towards a partner in relation to emotional invalidation in childhood. The reasoning for this was we anticipated that a self-guided written expression of gratitude with their romantic partner present could help disentangle individual effects from partner effects in how childhood emotional invalidation shapes gratitude dynamics, as shown by the difference between expressed versus perceived gratitude.

Method

Participants

Sixty-five romantic couples ($M_{age} = 26.54, SD = 9.85$) aged 18 and older, in committed relationships with each other and that had sex within the past three months consented to take part and completed this study. After data collection, two couples were excluded as one or both members of the couple did not complete the survey, and another three couples were excluded for not answering the gratitude prompt correctly. This left a final

sample of 120 participants (50% women; 55% White, 25% Asian, 9% Mixed Ethnicity) in 60 dyads (77% exclusively dating; relationship length: $M = 3.66$ years, $SD = 5.236$). A sensitivity power analysis was conducted using APIMPowerR (Ackerman & Kenny, 2016) to determine the minimum effect size that could be detected with the available sample. With 54 indistinguishable dyads (108 participants), the analysis indicated that the study had 47% power to detect a minimum actor effect size of $\beta = .136$ and 8% power to detect a partner effect size of $\beta = .035$.

Couples were recruited through multiple channels including from the departmental research participation subject pool (SONA) for course credit, Essex Lab for compensation and via posters around campus and through social media platforms (e.g., Facebook, Instagram) between March 2024 and June 2025.

Procedures

Prior to the lab experiment, eligible participants first completed demographic questions (e.g., age, gender, ethnicity, relationship status) followed by a measure of emotional invalidation in childhood, adult insecure attachment and relationship satisfaction. Couples then attended a laboratory visit lasting approximately one hour and fifteen minutes, as part of a larger study (procedures described in Chapter 5). After the main purpose of the experiment was complete, as part of additional data collection, participants were asked to write a letter of gratitude to their partner and were given the below prompt:

“Finally, we would like you to give you a moment to express your gratitude to your partner. We'd like you to think about a specific positive thing your partner did for you recently for which you felt grateful. Your partner's positive gesture may be something that happened before but continues to make you grateful, or something going on now. Some examples would be helping to solve a problem, surprising you with a gift, taking time to listen

to a concern, spending time doing something they would not typically do or similar things. We would like you to pick something good that has been on your mind recently, no matter how big or small. Please take a moment to write a letter of gratitude to your partner below. This will not be shared with them, but you are welcome to tell them what you wrote about after the study.”

After completion of their letter, participants were thanked for their participation and fully debriefed. The descriptive statistics and correlations between variables are presented in Table 29.

Table 29 - Descriptive Statistics and Correlations for Study 10

	1	2	3	4	5	6	7	8
1. Actors Emotional Invalidation	-	.12	.30***	.20*	.16	.05	-.05	-.015
2. Actors Expressed Gratitude		-	.04	-.08	.05	.44***	.07	.05
3. Actors Anxious Attachment			-	.14	-.05	.07	-.30**	.13
4. Actors Avoidant Attachment				-	-.15	.05	.13	.26**
5. Partners Emotional Invalidation					-	.12	.30***	.20*
6. Partners Expressed Gratitude						-	.04	-.08
7. Partners Anxious Attachment							-	.14
8. Partners Avoidant Attachment								-
M	2.55	2.37	3.74	2.16	2.55	2.37	3.74	2.16
SD	.91	1.07	1.13	.088	.91	1.07	1.13	.088
Scale Range	1-5	1-5	1-7	1-7	1-5	1-5	1-7	1-7

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Materials

Gratitude towards partner. Gratitude was measured using methodology taken from Algoe, Fredrickson & Gable (2013). Participants were asked to think about a specific positive thing their partner did for them recently for which they felt grateful (e.g., surprising them with a gift, taking time to listen to a concern). Once identified, they were asked to write a letter of gratitude to their partner.

Analytic Strategy

Two coders rated the extent to which participants emphasised the expression of gratitude in their letter with four items on a 5-point Likert scale (1 = not at all, 5= very much): “overall, how grateful, thankful and appreciative did the participant seem for their partner?”, “overall, how specific was the event or behaviour to which the participant expressed gratitude?”, “how much positive emotion did the participant convey in the gratitude letter/expression?” and to “what extent does the expresser link the event or behaviour they are grateful for to the relationship?”. The internal consistency of the four coded items was assessed separately for each coder. The coding scheme demonstrated good internal consistency for Coder 1 ($\alpha = .809$) and Coder 2 ($\alpha = .762$). This coding scheme was developed specifically for the present study to capture aspects of participants’ responses that were not adequately represented by existing coding schemes and to ensure that the coding framework was aligned with the research question. Coding instructions can be found in Appendix C.

Ratings from each coder were averaged across the 4-items to create an aggregate gratitude index. Interrater reliability of $\geq 75\%$ was considered acceptable. Interrater reliability estimates and their 95% confidence intervals were calculated using R Studio (Version 4.1.2) based on a mean rating ($k=2$), consistent agreement, 2-way mixed effects model. Interrater reliability was good, $ICC(2,1) = .867$, 95% CI [.809, .907], $p < .001$, indicating an acceptable

threshold for consistency between raters based on the classification standards by Koo and Li (2016).

We used the actor-partner interdependence model (APIM; Kenny et al., 2006), a form of multi-level modelling, to account for the interdependent nature of the data structure, with partners nested within couples. APIM investigates both actor effects (the degree to which an individual's predictor has on their own outcome variable), as well as partner effects (the degree to which an individual's partner's predictor has on the actor's outcome variable). Dyads were treated as indistinguishable as we included same-sex and non-conforming gendered couples. Using APIM, we predicted there would be actor and partner effects of emotional invalidation in childhood on expression of gratitude towards a romantic partner.

Results

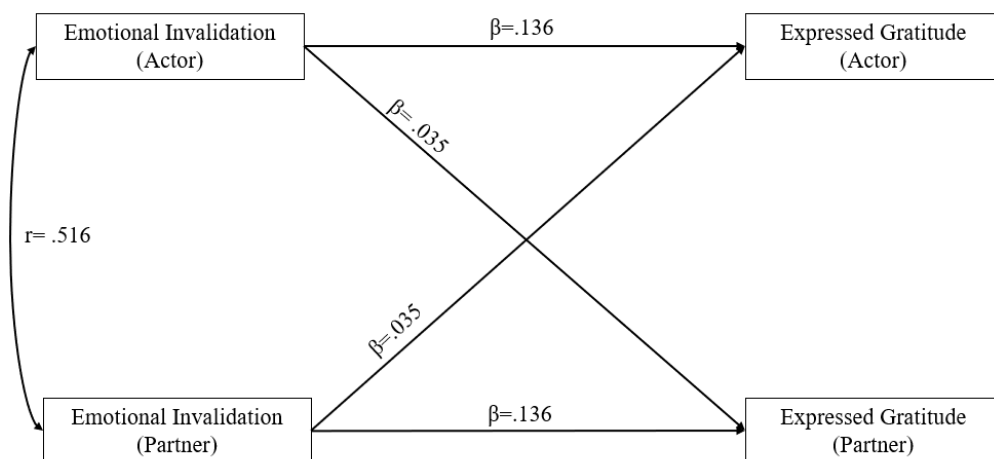
APIM model

There was no support for our main hypotheses. For actor effects, own experiences of invalidation in childhood was not associated with own expressions of gratitude, $b = .136$, $SE = .106$, $t(106.28) = 1.284$, $p = .202$. For partner effects, partner's childhood emotional invalidation did not predict actor's expression of gratitude, $b = .035$, $SE = .106$, $t(106.28) = .332$, $p = .741$ (Table 30 & Figure 20). The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Table 30 - Associations between actor's and partner's emotional invalidation and expressed gratitude for Study 10

Predictors	Dependent Variables			
	Expressed Gratitude			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Actors Emotion Invalidation	.136	.106	1.284	.202
Partners Emotion Invalidation	.035	.106	.332	.741

Figure 20 - APIM Model: Emotional invalidation and expressed gratitude



Discussion

Literature has shown the negative impact that emotionally invalidating environments can have in childhood (Lambie & Lindberg, 2016) and in adulthood (e.g., Krause, Mendelson & Lynch, 2003) with growing literature showing how it contributes to poor interpersonal functioning (Huxley, Seaton & Grenyer, 2021) and dysfunction (Selby et al., 2008). Negative emotional experiences in childhood are known to be associated with attachment difficulties in adulthood (Gonçalves et al., 2021; Rendina, 2018). Insecure adult attachment has been

known to negatively influence a variety of relationship processes, with one area of interest being gratitude (Vollmann, Sprang & van den Brink, 2019). Gratitude can be defined as an emotion that derives from the recognition that a positive experience occurred because of someone else's responsive behaviour (McCullough, Emmons & Tsang, 2002; Algoe, 2012) and has numerous benefits for romantic relationships such as feeling close and connected to your partner (Murray & Hazelwood, 2011; Algoe, Gable & Maisel, 2010). With gratitude requiring you to view your partner in a positive light, those who have experienced emotional invalidation might be less likely to feel grateful or express gratitude for their romantic partner due to perceptions of them being unresponsive, similarly to those that are insecurely attached in adulthood (Simpson & Rholes, 2017). Furthermore, individual differences that are due to experiencing emotional vulnerability like those with a history of emotional invalidation may mean they are less likely to perceive gratitude from a romantic partner. This may be because of their negative expectations of their partner, as shown by similar vulnerabilities such as insecure attachment (Overall et al., 2015). This chapter focused on whether experiences of emotional invalidation reduced the likelihood of gratitude towards a romantic partner, perceiving gratitude from a partner and overall expression of gratitude between couples.

Our findings varied across all three studies. In Study 8, we found there was no direct association between emotional invalidation in childhood and feeling grateful for or expressing gratitude to a romantic partner. In Study 9 when exploring the perceptions of gratitude from a romantic partner, we found direct support for emotional invalidation and feeling like your partner was grateful, but no support for perceptions of expressed gratitude for them. Specifically, we found that those that had a history of emotional invalidation in childhood were less likely to feel like their partner was grateful, thankful or appreciative for them. Finally, consistent with the findings from Study 8, we found no support for actor or partner effects for emotional invalidation and expressed gratitude (Study 10).

In Study 8, when controlling for adult anxious and avoidant attachment, the association between emotional invalidation and felt and expressed gratitude was then significant but positive. Similarly, in Study 9, emotional invalidation only significantly predicted perceived expression of gratitude from a partner, except positively. When exploring the indirect effects of adult insecure attachment, only avoidant attachment mediated the association in Study 8; with emotional invalidation leading to less felt and expressed gratitude. In Study 9, both anxious and avoidant attachment mediated the relationship, with experiences of emotional invalidation meaning individuals were less likely to perceive feelings and expressions of gratitude from their partner.

Implications

Our findings have some important implications for both emotion and relationship research. In relation to previous findings, the research in this chapter has contributed to existing research on the impact of emotional invalidation and negative outcomes in adulthood. We also have supported previous literature that has explored the relationship between emotional invalidation and adult insecure attachment (Rendina, 2018; Gonçalves et al., 2021) by showing that emotional invalidation is associated with fears of abandonment and avoidance of intimacy in romantic relationships. It is clear that attachment plays a large role in the relationship between emotional invalidation and gratitude, which is no surprise considering the negative influence insecure attachment has shown to have on gratitude (Vollmann, Sprang & van den Brink, 2019). However, our findings suggest that when including emotional invalidation in the model, it may also have a detrimental effect on the gratitude experience.

As with the other chapters, we have highlighted another relational process that can be impacted by emotional invalidation, through its disruption of working models of self and others which shapes gratitude expressions in relationships. As with Chapter 2, we have found

some support beyond the preexisting literature that focuses on negative relationship outcomes or processes (e.g., conflict; Elzy, Keaton, Bogus & Raymond, 2024) and have been able to explore the consequences on positive relationship outcomes, similar to Chapter 3.

Furthermore, we have provided support for the distinction between feeling and expressing gratitude as well as the perceptions of others and their gratitude for you. This has facilitated an important discussion around whether emotional invalidation impacts behaviour (Study 8) or perceptions (Study 9), with there seemingly being more direct support for the latter. This is important as we know having a positive perception of your romantic partner can lead to more positive outcomes for your relationship (Lambert & Fincham, 2011).

In this chapter, we extended the existing literature using different methodology and analytic strategies for measuring gratitude to gain a clearer understanding of the relationship between emotional invalidation in childhood and expression of gratitude between romantic partners. Despite the non-significant findings, we applied the Actor Partner Interdependence Model to explore emotional invalidation in childhood, highlighting the importance of this methodology as it accounts for both partners within the same model. Overall, we explored a novel area of research in this chapter and added important insights into the field of gratitude research and the potentially individual differences that can influence whether people engage in this type of prosocial behaviour or not.

Limitations and future directions

There are several limitations in this chapter that might help explain the inconsistency between findings and lack of support for our hypotheses. Firstly, Study 8 and 9 asked participants to reflect on gratitude but it was not in reference to a particular event, only referring to general gratitude, and whether they feel it and believe they do it (or their partner feels or does it). We attempted to overcome this limitation in Study 10 by including a self-guided written measurement, with participants having to directly reference a partner's action.

However, upon coding, there were some instances where participants wrote about their gratitude more generally (e.g., “I want to thank them for being in my life) as opposed to something their partner had done that they were grateful for (e.g., I made them dinner when they were stressed), which the specific prompt detailed. Between studies, gratitude scores were at least two points higher in Study 8 and 9 than in Study 10. This might have been due to the self-reported nature in Study 8 and 9 versus the coding of gratitude responses by raters. It is important to note though there was high consistency across the two raters in Study 10 ($ICC(2,1) = .867$, 95% CI [.809, .907], $p < .001$). Future directions should look at an alternative methodology above and beyond self-report, as there seems to be no difference in whether they actually expressed gratitude.

To address some of the inconsistencies in the findings, future directions exploring the relationship between emotional invalidation and gratitude would benefit from reframing the role of gratitude. It may be that our findings showed there is no difference in whether those who have history of emotional invalidation express gratitude to their partner as gratitude might buffer against some of the negative outcomes that we know individuals experience due to being invalidated. Research has shown that dispositional traits that influence working models of the self and others (i.e., low self-esteem and insecure attachment) may benefit from a gratitude intervention (Rash, Matsuba & Prkachin, 2011) and lead to more positive outcomes for those with this experience (e.g., LaBelle & Edelstein, 2018; Park, Johnson, MacDonald & Impett, 2019). Due to the non-significant findings, it could be that emotional invalidation does not directly influence gratitude, but rather gratitude could be used as a buffer against the other negative outcomes of emotional invalidation. Conducting an experimental study whereby gratitude is used as an intervention rather than an outcome in relation to emotional invalidation might warrant significant results.

Another limitation we encountered in this chapter is that adult insecure attachment accounted for a lot of the variance when controlling for it in Study 8 and 9, thus experiencing suppression or floor effects. Therefore, it might be that attachment plays a potentially larger role in the association between emotional invalidation and gratitude than invalidation itself. This was further shown when conducting mediation analyses, with findings showing that there was only a significant effect on emotional invalidation and own felt gratitude and expression through insecure attachment (Study 8). Future research should account for this by better considering the relationship between emotional invalidation and adult attachment in terms of shared variables and constructs as well as whether there are other factors that could help explain this association.

Similarly, the lack of inclusion of other potential mechanisms that could help explain the association between emotional invalidation and gratitude may be a limitation in this research. Although we found indirect effects of insecure attachment in Study 8 & 9, exploring emotional mechanisms like in Chapter 2 & 3 might have established more robust findings in terms of comparison between chapters. Despite this, we did find one direct association and so it would be beneficial to better understand why those who have experienced emotional invalidation feel like their romantic partner is not grateful, appreciative or thankful for them. Potential reasons could be linked to self-inadequacy (i.e., they feel they are undeserving; Naismith, Zarate Guerrero & Feigenbaum, 2019) or rejection sensitivity (i.e., they are worried their partner does not feel that way; Stadnik, 2021), which people with a history of emotional invalidation do feel.

Conclusion

Gratitude is important as it acknowledges positive emotion from a romantic partner's action, something that is important for committed, satisfied relationships (Algoe, Gable & Maisel, 2010). Due to it being an inherently relational and emotional process, it is important to look

at the role previous experiences with emotion plays, specifically how growing up in an emotionally invalidating environment may negatively impact the role of gratitude. The findings from this chapter show that people who are emotionally invalidated are more likely to be insecurely attached and therefore less likely to feel and express gratitude for a partner, as well as underperceive gratitude from their partner. Overall, we have found support for how emotional experiences in childhood has important consequences for relationship maintenance behaviours in adulthood (i.e., gratitude), especially if they are insecurely attached to their romantic partner.

Chapter 5: The consequences of childhood emotional invalidation in capitalising romantic couples: a challenge and threat perspective

Abstract

Children who grow up in emotionally invalidating home environments in which caregivers dismiss, criticise and punish them for their thoughts, feelings and behaviours (Linehan, 1993) often experience negative outcomes in adulthood, especially interpersonally (e.g., Lombardo, Waters & Elzy, 2023). One important relational process is capitalisation, defined as disclosing a positive event with the hope of an enthusiastic response (Langston, 1994) and is known to have many relational benefits (e.g., higher relationship satisfaction and intimacy; Gable, Reis, Impett & Asher 2004). Capitalisation relies on the feeling of having a responsive and enthusiastic partner, something that people who have experienced emotional invalidation might struggle with, due to fears of rejection. As such, these conversations might be deemed as or feel stressful. In a physiological experiment ($N_{total} = 54$ dyads; 108 participants) using Actor-Partner Interdependence Model and the biopsychosocial model, we explored how people with histories of emotional invalidation physiologically react (i.e., challenge or threat) to a capitalisation attempts with a romantic partner. We did not find support that emotional invalidation influenced either challenge or threat during a capitalisation discussion, or that it predicted perceived responsiveness of their partners capitalisation attempts. Overall, our findings suggest that although previous experiences of emotional invalidation may not directly influence internal states during capitalisation discussions, emotional invalidation might still function within a more complex relational system.

Introduction

General overview

The emotional environment in which we are raised is extremely important, with negative experiences relating to difficulties with emotion processing and regulation (Eisenberg, Fabes, & Murphy, 1996). A specific experience, growing up in an emotionally invalidating environment, has been shown to have detrimental effects, translating from childhood into adulthood. Emotional invalidating environments can be defined as the dismissal and trivialisation of thoughts and feelings (Linehan, 1993). Research has shown it to be associated with how we handle, develop and express our emotions in adulthood (Ford et al., 2011), with experiences of emotional invalidation strongly influencing difficulties with emotion regulation (Hope & Chapman, 2019), fear of emotion (Sauer & Baer, 2009) and negative attitudes towards emotional expression (Haslam et al., 2012).

With growing literature showing emotionally invalidating environments negatively impacts romantic relationships (e.g., dysfunction; Lombardo, Waters & Elzy, 2023), we explored capitalisation – as defined as disclosing a positive event with the hope of an enthusiastic response (Langston, 1994) – in Chapter 3. Our findings highlighted that those with a history of emotional invalidation are less likely to capitalise with a close other (i.e., romantic partner or best friend) due to having negative attitudes towards emotional expression. Furthermore, people having a fear of social rejection when sharing or expressing one's positive emotions was a specific factor in why those who were raised in emotionally invalidating environments were less likely to capitalise with a close other.

As such, we were interested in exploring these findings further in a dyadic and naturalistic context of a romantic relationship. Capitalisation doesn't occur independently or in a vacuum; it is reliant on a responsive partner (Gable & Reis, 2010). Going beyond the

previous self-reported consequences of invalidation, we wanted to explore individual's physiology in response to capitalisation with their partner using the biopsychosocial model of challenge and threat. This model provides a framework for understanding stress in this context by integrating couples' internal states, responses and behaviours by enabling an exploration of the affective, physiological, and behavioural effects of capitalisation in romantic relationships. Previous research, both in the literature and so far in this thesis, has primarily focused on the self-reported, independent consequences of emotional invalidation. In this chapter, we were interested in the dyadic experience of sharing a positive experience with a partner when one or both of individuals has experienced childhood emotional invalidation. Potential dyadic implications suggest that emotional invalidation may inhibit prosociality in relationships because relationships are inherently dyadic.

Overall, the aim of the study was to test whether emotional invalidation in childhood is associated with greater cardiovascular challenge or threat when capitalising with a romantic partner in a dyadic context. Specifically, we hypothesised that individuals with a history of emotional invalidation were more likely to elicit cardiovascular threat in response to capitalisation with a partner due to a fear of rejection from said partner.

Emotional invalidation in childhood and expression

Negative emotional experiences in childhood (e.g., poor family functioning) have a negative impact in both childhood (Dutra Cipriano Lara, et al., 2022) and adulthood (Schlensog-Schuster et al., 2024). Being emotionally invalidated by a caregiver (i.e., the dismissal and trivialisation of emotion; Linehan, 1993) can cause children to self-invalidate (Lambie & Lindberg, 2016) and not trust their own emotions (Eisenberg et al., 1998). A plethora of literature has examined its negative impact in adulthood, with emotional invalidation in childhood being related to emotional dysregulation (e.g., emotion inhibition,

negative attitudes towards emotional expression; Hope & Chapman, 2019, Haslam et al., 2012) and maladaptive emotional functioning (Ford et al., 2011). One characteristic of interest is emotional expression, something that is very important in interpersonal contexts (Johnson, 1996), particularly relational processes that are reliant on positive emotion and self-disclosure.

Those that have experienced emotional invalidation in childhood are likely to experience psychological distress in adulthood (Kim, 2025) and avoidantly respond to distressing circumstances (Krause, Mendelson & Lynch, 2003). Beyond childhood invalidation, previous literature exploring perceived emotional invalidation in a more general interpersonal context found that invalidation of emotion is associated with greater social stress intensity (Zielinski et al., 2023). As such, we predicted that those who have experienced emotional invalidation in childhood may be more susceptible to stressful situations.

Previous literature has mostly explored how emotional invalidation is related to negative relational outcomes such as dysfunction (Lombardo, Waters & Elzy, 2023), and less intimacy (Valdivieso, 2021). Recent literature has shown how it is related to more positive outcomes (e.g., less perceived relationship support; Elzy et al., 2024), something that is important in prosocial contexts. There has been limited literature on the impact of emotional invalidation on positive relational processes and next to no research conducted beyond self-reported consequences of emotional invalidation. As such we were keen to extend previous findings from Chapter 3 which found those who have experienced emotional invalidation in childhood are less likely to capitalise.

Capitalisation in dyadic contexts

One important interpersonal process is capitalisation, which can be defined as the retelling of a positive event or news with the hope of an enthusiastic response (Langston, 1994). When the partner is seen to be responsive by the discloser of the positive event, this validates them and makes them feel understood (Gable & Reis, 2010). There has been a wide range of literature that has illustrated the benefits of capitalisation within a romantic relationship, including but not limited to more relationship satisfaction, feeling more committed and a sense of acceptance from a partner (Donato et al., 2014; Gable et al., 2004; Pagani et al., 2020).

As capitalisation is inherently a relational and reciprocal process (Kaczmarek et al., 2022), there is a benefit in exploring the interdependence nature of capitalisation within couples. Research has shown that those who felt their partner was enthusiastic to their own attempt were more motivated to respond enthusiastically to their partner (Kaczmarek et al., 2022) and consequently is linked to more positive interpersonal outcomes (e.g., higher relationship quality; Reis et al., 2010). As such we were interested in the perceptions of the capitalisation attempt as well and how individuals believe their partner will act to their positive news. Specifically, research has shown that more active and constructive responses from a partner are associated with better relational outcomes (Gable et al., 2006), due to the perception that their partner has validated their positive emotion (Peters et al., 2018).

Despite this, there are instances that can disrupt the capitalisation process. Individual differences may make people feel like they cannot capitalise with their romantic partner, as well as impacting their perception of supportive responses. For example, those with low self-esteem often viewed their partner as less enthusiastic (Smith & Reis, 2012). Similarly, those that believed their partner to have low self-esteem were less likely to capitalise more positively (MacGregor & Holmes, 2011). Furthermore, insecurely attached people were less

likely to respond enthusiastically themselves and to perceive enthusiasm from their partner in capitalisation discussions (Shallcross et al., 2011; Kırmıer-Aydınlı & Sümer (2024). As our findings have shown those who experienced emotional invalidation are less likely to capitalise, we deemed it important to measure capitalisation dyadically, this time exploring how a partner's invalidation can influence outcomes.

The biopsychosocial model and the consequences of cardiovascular stress

As previous literature has only explored the self-reported consequences of emotional invalidation, we were interested in exploring the biological consequences of capitalisation for those that have experienced emotional invalidation. One particular theory, the biopsychosocial model of challenge and threat, aids this. The biopsychosocial model of challenge and threat details how individuals appraise stress, either through demands (e.g., uncertainty) or resources (e.g., familiarity) during a demanding task (Blascovich, 2013; Jamieson, 2017), which can lead to cardiovascular activation. Specifically, when people appraise that the demands are greater than their resources, they tend to experience a threat response. Contrastly, when people appraise that their resources are more than the demand, they experience a challenge response. This model offers a framework that integrates cognitive, affective and physiological responses (Blascovich, 2008) and allows us to model stress *during* interactions using physiological indices instead of retrospective self-reports after the conversation is over, with the usage and validity of these physiological markers being supported by many studies (e.g., Lamarche et al., 2020; Streamer et al., 2017).

There has been extensive research to support the biopsychosocial model in an interpersonal context (e.g., Peters et al., 2024; Tudder et al., 2020), with couples greatly influencing each other's emotions and physiology (Arriaga & Agnew, 2001; Berscheid & Ammazzalorso, 2001; Palumbo et al., 2017). For example, when individuals were more

emotionally suppressed during an emotional conversation, they exhibited more negative physiological responses in a dyadic context (Peters & Jamieson, 2016). Certain interpersonal contexts are also shown to elicit more physiological reactivity (e.g., conflict; Robles & Kiecolt-Glaser, 2003) and some have shown to buffer against cardiovascular stress (e.g., trait forgiveness; Friedberg, Suchday & Shelov, 2007). In relation to capitalisation, partners that capitalised with each other had reduced cardiovascular stress (Kaczmarek et al., 2022), with not being enthusiastic and responsive during these attempts increasing emotional and physiological vulnerability (i.e., more shared stress between couples; Shrout et al., 2023).

Although emotional invalidation in childhood and the cardiovascular consequences has not been studied, there are characteristics that can create cardiovascular stress in certain contexts. Research has shown that good family relationships were associated with handling stress better (Luecken, Rodriguez & Appelhans, 2005). In a relationship context, insecurely attached individuals had heightened heart rate and blood pressure during a stressful task, more so when their romantic partner was absent (Feeney & Kirkpatrick, 1996). Research has also found that when exploring physiological responses of people who were invalidated during stressor tasks, those in this condition showed increased arousal and reduced social engagement behaviours (Greville-Harris et al., 2016).

In relation to this chapter, we argue that the biopsychosocial model of challenge and threat can be applied to situations where couples are encouraged to discuss their positive news with one another (i.e., capitalisation). By exploring challenge and threat responses dyadically in this context (Kenny et al., 2006), we can examine how both people's emotional invalidation histories are associated with appraisal processes (i.e., challenge or threat) during a capitalisation discussion. Based on what we know about people with a history of emotional invalidation, we would anticipate that they would be reluctant to engage in this behaviour, per

the findings from Chapter 3, thus appraising that the demands are greater than their resources and consequently experiencing a threat response.

Chapter overview

Literature has shown that there are negative consequences of emotional invalidation in childhood (e.g., self-invalidation; Rogers, 1959) that persist into adulthood (e.g., fear of emotion; Sauer & Baer, 2009). Emotional invalidation is associated with negative attitude towards emotion expression, fear of emotion, difficulties with emotion regulation; important things needed to express positive news to a partner in the hope of receiving an ‘enthusiastic response’, as characterised by capitalisation (Gable & Reis, 2010). Individual differences with emotion might make it more difficult for people to disclose to their partner as they believe that they should keep their emotions to themselves due to a fear of rejection. In these instances, individuals might find conversations that require disclosure stressful. One way to test whether this is the case is adopting the biopsychosocial model of challenge and threat, a framework that allows us to model stress during interactions using physiological indices instead of retrospective self-reports. Research has shown that certain conversations can buffer against cardiovascular threat (e.g., gratitude; Gu, Ocampo, Algoe & Oveis, 2022), but less so if you have poor quality family relations (Luecken, Rodriguez & Appelhans, 2005). Individual differences in how we handle emotion also contributes to worse cardiovascular responses (e.g., emotion suppression; Peters & Jamieson, 2016).

Following from our findings in Chapter 3, the biopsychosocial model of challenge and threat allows to test stress responses during a capitalisation event as couples are engaged in the discussion, rather than relying on self-report after the fact. For example, we found that people said their capitalisation attempt would be worse (i.e., more uncomfortable) if they had a history of emotional invalidation. The biopsychosocial model allows us to measure if this is

just a bias or a stressor they take into capitalisation attempts. Furthermore, as those who have experienced emotional invalidation are known to not capitalise (i.e., more uncertainty), we believe they would exhibit more threat responses. Furthermore, we get to test our hypotheses from Study 7 more robustly. We detailed the reason the capitalisation effects did not replicate in the partner sample (Study 7) is because it is difficult to manipulate a history of invalidation for someone you know. But in the present study, we get to test this again dyadically with the partner's own self-reported invalidation as a predictor of the other person's stress during the exchange using the Actor-Partner Interdependence Model.

In this chapter we examined whether emotional invalidation in childhood is associated with greater cardiovascular stress (i.e., challenge and threat) when discussing a positive event (i.e., capitalising) with a romantic partner. The dyadic structure of our data allowed us to make a hypotheses for both actor and partner effects. The hypotheses below are our a priori hypotheses for the actor effects. We anticipated that any partner effects that emerged would show a similar pattern. Firstly, we predicted actor effects of emotional invalidation on threat responses such that greater emotional invalidation in childhood will be positively associated with cardiovascular threat (i.e., maladaptive response) when capitalising with a romantic partner. Furthermore, we predicted actor effects of emotional invalidation predicting perceived discussion success, such that greater emotional invalidation will be associated with more negative evaluations about how responsive they believed their partner was during the discussion.

The study analytic strategy in this chapter was pre-registered. This can be found on the project repository on AsPredicted (AsPredicted; <https://aspredicted.org/9bc8gi.pdf>). The study reported in this chapter received approval from the University of Essex Ethics Subcommittee 3.

Study 11

Method

Participants

Sixty-five romantic couples ($M_{age} = 26.83$, $SD = 10.24$) aged 18 and older, in committed relationships with each other and that had sex within the past three months consented to take part and completed this study. After data collection, eleven dyads were excluded: nine for unusable physiological data and two for incomplete survey data. This left a final sample of 108 participants (48% women; 45% men; 57% White, 23% Asian) in 54 dyads (78% in a committed relationship; relationship length: $M = 3.81$ years, $SD = 5.456$). A sensitivity power analysis was conducted using APIMPowerR (Ackerman & Kenny, 2016) to determine the minimum effect size that could be detected with the available sample. With 54 indistinguishable dyads (108 participants), the analysis indicated that the study had 78% power to detect a minimum actor effect size of $\beta = .184$ and 45% power to detect a partner effect size of $\beta = .124$.

Couples were recruited through various channels including from the departmental research participation subject pool (SONA) for course credit, Essex Lab for compensation and via posters around campus and through social media platforms (e.g., Facebook, Instagram) between March 2024 and June 2025.

Procedures

Eligible couples who consented to participating in the study were asked to take part in a survey before arriving at the lab. This contained background demographics (e.g., age, gender, ethnicity, relationship status) followed by measures of emotional invalidation in childhood, adult insecure attachment and relationship satisfaction. On the day of the experiment, couples arrived at the lab together and completed a survey to confirm they

consented to taking part in the experiment. Once they consented, they were both independently asked to identify the topics they were going to discuss in the experiment in reference to a positive event they wanted to share with their partner.

After completing the survey, physiological sensors were attached to each of the participants bodies, the signals were checked and participants rested for a 4-minute baseline prior to the discussion. Next, participants took part in one of two discussions about their relationship with their partner. Only one discussion is relevant for this chapter, and the two discussions were counterbalanced. Participants were then told a prompt detailing what their discussion would be about. After the 6-minute discussion, participants completed measures assessing their perceptions of themselves and their partner during the discussion. Finally, participants were thanked for their participation and fully debriefed.

Baseline period

Following the initial in-lab acclimation period in which participants completed the consent form and discussion question, participants were attached to the non-invasive physiological sensors followed by a 4-minute resting baseline period, similarly used in other literature as it provides a long enough relaxation period without risking fatigue (e.g., Saltsman et al., 2021). After the signals were clean and the experiment was ready to start, experimenters monitored the incoming signals from a control room, and the participants via a live video feed. Specific instructions surrounding the baseline period can be found in Appendix D.

Discussion prompt

After the baseline period, participants were told that the next portion of the experiment will start. Over the intercom, couples were given a more detailed prompt for their discussion by one of the experimenters. All couples were told the following:

“In this part of the study we would like you to each share something positive that has happened to you recently. Please think back to what you identified earlier for the prompt about ‘a positive event that you have not yet shared with your partner’. You will take turns talking about your events and you will decide who goes first.”

Participants then decided amongst themselves who would start the conversation, and they naturally counterbalanced their conversation across the 6 minutes, so they could both talk about their positive event. In the case of one participant talking about their positive event for more than 3 minutes, the experimenter would intervene over the intercom and ask the other member of the couple to talk about their positive event so that they both had the opportunity to capitalise. Specific instructions surrounding the discussion prompt can be found in Appendix D. The descriptive statistics and correlations between variables are presented in Table 31

Table 31 - Descriptive Statistics and Correlations for Study 11

	1	2	3	4	5	6
1. Actors Emotional Invalidation	-	-.11	.01	.14	.07	-.02
2. Actors Challenge and Threat Index		-	-.02	.07	-.02	-.04
3. Actors Perceived Responsiveness			-	-.02	-.04	.32***
4. Partners Emotional Invalidation				-	-.11	.01
5. Partners Challenge and Threat Index					-	-.04
6. Partners Perceived Responsiveness						-
M	2.58	-.01	3.05	2.58	-.01	3.05
SD	.89	1.34	1.59	.89	1.34	1.59

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Measures

Cardiovascular

Challenge/Threat Index. There were four cardiovascular indexes that were assessed and calculated from the baseline and during the discussion: (1) heart rate (HR); (2) ventricular contractility (VC); (3) cardiac output (CO); and (4) total peripheral resistance (TPR). Cardiovascular challenge (indexed by relative-to-baseline increases in HR and CO and decreases in TPR and VC) is a positive stress response associated with increased engagement and performance. Cardiovascular threat (decreased HR and CO, and increased TPR and VC) is a negative stress response associated with poorer performance, reduced self-efficacy, and disengagement (Lamarche et al., 2020; Seery, 2013; Blascovich, 2008). Reactivity was assessed via cardiovascular biomarkers for each participant, with challenge/index created by subtracting TPR from CO (i.e., TPR was reverse scored), so that higher values indicated relative challenge and lower values indicated relative threat.

These biomarkers were recorded non-invasively during their 4-minute baseline and 6-minute discussion using MindWare Mobile ECG/ICG Systems. Blood pressure readings were collected using WatchBP Office - Microlife. Blood pressure cuffs were placed on participants' nondominant arm to measure pressure derived from the brachial artery. Recordings were taken at 1-min intervals during each epoch (baseline and discussion) and initiated via Bluetooth from a separate control room.

Self-report

Emotional Invalidation in Childhood. Emotional invalidation in childhood was measured using the 14-item ($\alpha = .91$) Invalidating Childhood Environment Scale (ICES; adapted from Mountford, Corstorphine, Tomlinson & Waller, 2007), adapted to refer to both parents rather than each caregiver individually (e.g. "My parents would become angry if I

disagreed with them.”; 1 = never, 5 = all the time;). Items were averaged after being reverse coded, with higher scores reflecting greater emotional invalidation in childhood.

Perceptions of Capitalisation. Perceptions of the capitalisation attempt after the discussion was measured using the Perceived Responses to Capitalisation Attempt scale (PRCA; Gable, Reis, Impett & Asher, 2004) to assess perceptions of their partner in regard to the discussion. This 12-item measure employs a 7-point scale (1= not at all true to 7= very true) and is separated into four categories: active-constructive ($\alpha = .67$; e.g., “My partner usually reacts to my good fortune enthusiastically.”), passive constructive ($\alpha = .79$; e.g., “My partner tries not to make a big deal out of it, but is happy for me.”), active destructive ($\alpha = .76$; e.g., “My partner reminds me that most good things have their bad aspects as well.”) and passive destructive ($\alpha = .85$; e.g., “My partner often seems disinterested.”). A total score of perceptions of capitalisation was created in alignment with past research (Gable et al., 2004) by subtracting the means of passive constructive, active destructive and passive destructive from active-constructive, with a higher score representing more active constructive responses.

Results

Data cleaning

ECG and IMP were scored offline by trained members of the research team. Signals of all participants were visually examined for artifacts using Mindware software in one-minute segments. R-points in the ECG wave were detected by Mindware but were first checked for any irregularities. B-points in the dz/dt wave were then checked, along with the rest of the ensemble (Q, S, Z and X points) and manually corrected if in the wrong place. Reactivity scores for the discussion were calculated by obtaining the last minute of the baseline period (i.e., the most relaxed period) and subtracting from the first minute of capitalisation (i.e., the most reactive minute). This method of using change scores between

the last minute of baseline and the first minute of the task (i.e., capitalisation discussion) has been used extensively in research using the biopsychosocial model of challenge and threat (e.g., Blascovich et al., 1999; Peters & Jamieson, 2016).

APIM models

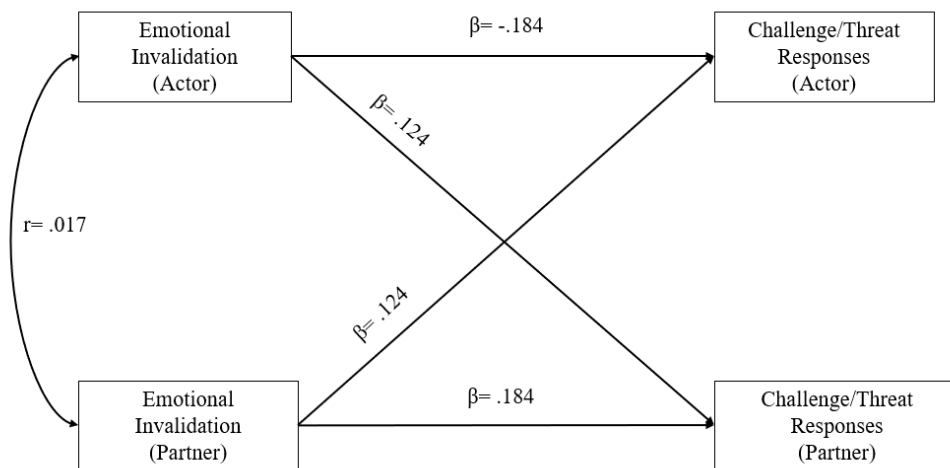
We used the actor-partner interdependence model (APIM; Kenny et al., 2006) for the analysis to control for the non-independent nature of the data structure, nesting individuals within their dyads. Dyads were treated as indistinguishable due to the demographics of our sample (i.e., same-sex and non-conforming gendered couples). We conducted a series of multilevel analyses in R Studio (Version 4.1.2) predicting challenge and threat responses and perceived responsiveness from their partner during the discussion from the actor and partner effects of emotional invalidation in childhood. The relevant statistical assumptions underlying the parametric tests (i.e., homoscedasticity, normality of residuals, and multicollinearity) were tested and met.

Firstly, we examined whether actor and partner emotional invalidation predicted challenge/threat responses, during the capitalisation discussion. We did not find support for our main hypothesis such that there were no significant actor effects for emotional invalidation on threat responses; people who had experienced emotional invalidation in childhood were no more or less threatened by the capitalisation discussion with their partner, $b = -.184$, $SE = .147$, $t(102.4) = -1.248$, $p = .215$. Similarly, there were no significant partner effects, such that own emotional invalidation in childhood did not significantly predict their partner's challenge/threat responses during the capitalisation discussion, $b = .124$, $SE = .147$, $t(102.4) = .845$, $p = .400$ (Table 32 & Figure 21).

Table 32 - Associations between actor's and partner's emotional invalidation and challenge/threat responses for Study 11

Predictors	Dependent Variables			
	Challenge/Threat Responses			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Actors Emotion Invalidation	-.184	.147	-1.248	.215
Partners Emotion Invalidation	.124	.147	.845	.400

Figure 21 - APIM Model: Emotional invalidation and challenge/threat responses



Perceptions of responsiveness

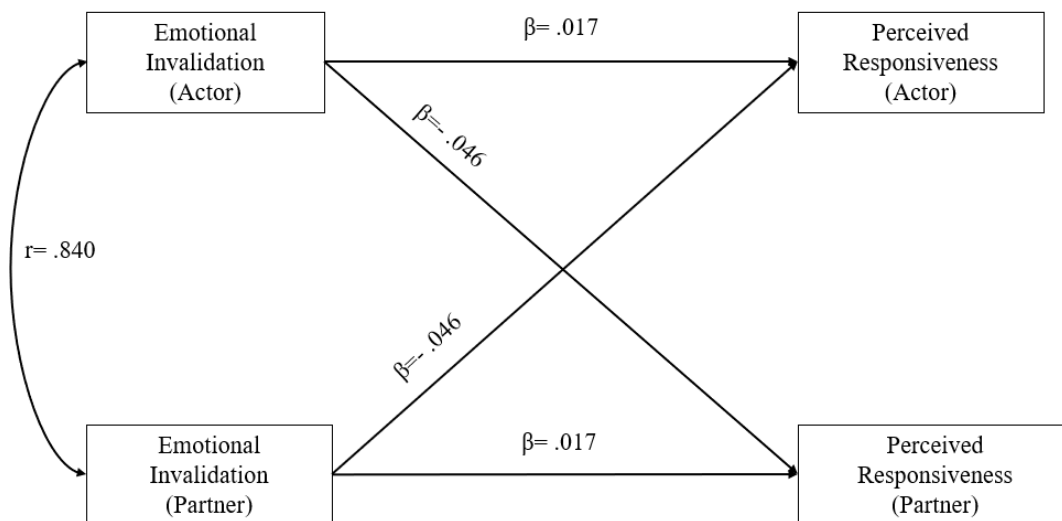
Next, we examined whether actor and partner emotional invalidation predicted perceptions of responsiveness during the capitalisation discussion. We did not find support for our main hypothesis such that there were no significant actor effects for emotional invalidation: people who had experienced emotional invalidation in childhood perceived no more or less active constructive responses from their partner (i.e., perceptions of responsiveness), $b = .017$, $SE = .171$, $t(100.96) = .098$, $p = .922$. Similarly, there was no significant partner effects, such that own experiences of emotional invalidation in childhood

was not significantly associated with their partner's reported perceptions of responsiveness, $b = -.046$, $SE = .171$, $t(100.96) = -.268$, $p = .789$ (Table 33 & Figure 22).

Table 33 - Associations between actor's and partner's emotional invalidation and perceptions of responsiveness for Study 11

Predictors	Dependent Variables			
	Perceptions of Responsiveness			
	b	SE	t	p
Actors Emotion Invalidation	.017	.171	.098	.922
Partners Emotion Invalidation	-.046	.171	-.268	.789

Figure 22 - APIM Model: Emotional invalidation and perceived responsiveness



Discussion

Emotional experiences in childhood greatly influences our emotional development and awareness in childhood (Eisenberg, Fabes, & Murphy, 1996; Lambie & Lindberg, 2016), with negative experiences such as emotionally invalidating environments disrupting this

(Rogers, 1959). Emotional invalidation can be defined as the criticising, dismissal and trivialisation of emotions (Linehan, 1993) and has been shown to influence emotional processes that could impact positive self-disclosure (e.g., attitudes towards emotion expression; Haslam et al., 2012) and psychological distress (Krause, Mendelson & Lynch, 2003; Kim, 2025). Disclosure in close relationships, specifically capitalisation, has been shown to be important due to its benefits for long, satisfying relationships (Gable et al., 2004). Literature has explored the potential stressful situations that arise from capitalisation conversations in romantic couples using the biopsychosocial model of challenge and threat (Shrout et al., 2023) with other literature illustrating that those who have difficulties with emotion perceive less responsiveness and find it more threatening (Peters & Jamieson, 2016).

One way to test whether this is the case for those that have experienced emotional invalidation is by adopting the biopsychosocial model of challenge and threat, which allows us to model stress during interactions using physiological indices instead of retrospective self-reports. Based on our previous findings in Chapter 3, we had reason to believe that those who have experienced emotional invalidation in childhood will find positive emotional expressions to their partner in the form of capitalising threatening (i.e., maladaptive response). In this chapter, we examined cardiovascular responses to a capitalisation discussion with a romantic partner using Actor Partner Interdependence Model (APIM; Kenny et al., 2006) and how this fared for those with a history for emotional invalidation. Furthermore, we explored whether those who had experienced emotional invalidation would have negative perceptions of their partners capitalisation attempt.

Contrary to our hypothesis, there were no actor effects of emotional invalidation predicting cardiovascular threat when capitalising with a romantic partner. Specifically, those that have greater emotional invalidation in childhood were no more likely to elicit cardiovascular threat responses or challenge responses when capitalising with a romantic

partner. There also were no partner effects such that those who had experiences of emotional invalidation were no more likely to be associated with their partner's cardiovascular threat or stress during a capitalisation discussion with a romantic partner. Furthermore, in contrast with our hypotheses, there were no actor effects of histories of emotional invalidation predicting perceived responsiveness from the capitalisation discussion. Similarly, individuals who experienced greater emotional invalidation were no more likely to have negative perceptions of how responsive they believed their partner was during the discussion and how they thought their partner was during the discussion. There were also no partner effects such that own history of emotional invalidation did not predict partner's reported perceptions of responsiveness from their romantic partner.

Implications

Unfortunately, our findings did not extend the literature and findings from Chapter 3, which found those that have experienced emotional invalidation have difficulties with emotional expression (i.e., positive self-disclosure; Haslam et al., 2012), which we expected to find in a dyadic context. We attempted to extend findings on capitalisation from Chapter 3 by incorporating more detailed and measured impressions of disclosure using the Perceived Responses to Capitalisation Attempts scale (PRCA; Gable, Reis, Impett & Asher, 2004) but did not find support for this either. Our findings in this chapter also did not complement existing literature that shows emotional processing or experiences influences how we behave in a relationship discussion (i.e., emotional suppression; Sels et al., 2025), with their findings demonstrating that more expressive suppression was associated with lower perceived responsiveness.

Furthermore, we did not provide novel findings to support the biopsychosocial model of challenge and threat. Our findings did not support the existing literature that shows those

with difficulties with emotion (i.e., emotionally suppressed individuals) had worse cardiovascular responses in an emotional conversation with a partner (Peters & Jamieson, 2016). Furthermore, we did not support that certain relationship maintenance behaviours elicit heightened cardiovascular responses (e.g., conflict; Robles & Kiecolt-Glaser, 2003). Finally, contrary to our hypotheses, we did not show that familial environments can influence experiencing cardiovascular stress in relationship contexts (Luecken, Rodriguez & Appelhans, 2005; Feeney & Kirkpatrick, 1996).

Overall, when considering previous findings, we did not extend the literature on emotional invalidation and romantic relationships. Beyond the existing findings in this thesis, we did not find support for emotional invalidation having negative consequences for positive relationship processes (e.g., relationship support; Elzy et al., 2024) or find this when exploring perceptions of responsiveness from a partner. We attempted to provide novel findings in capitalisation and emotional invalidation literature, but we found that individuals who have histories of emotional invalidation were no more likely to view their capitalisation attempt as active-constructive, passive constructive, active destructive or passive-destructive. This is in contrast to previous literature that found that those who elicited more positive emotions and inhibited more negative emotions were more enthusiastic in their response to capitalisation (Kaczmarek et al., 2022), as well as those that are avoidantly attached (Shallcross et al., 2011) and low self-esteem individuals (Smith & Reis, 2012) being less responsive or enthusiastic.

This research attempted to contribute new findings and an alternative measurement of the consequences of emotional invalidation beyond self-report using the biopsychosocial model. This was a more objective framework that allows the measurement of internal states, which gives insight into how people handle react without thinking (i.e., handle stress) and reflects processes that people may not be able to accurately verbalise. This is in comparison

to our previous chapters that have explored ‘feelings’ via self-report and as such attempted to highlight the difference between behaviourally (i.e., *are* they capitalising) versus self-report (i.e., do they *think* they are capitalising) measures. Despite the non-significant findings, this chapter suggests that there could be downstream consequences on prosociality but that the real focus needs to be on the person-level emotion regulation consequences (e.g., fear of rejection, emotion suppression) of emotional invalidation.

Limitations and future directions

Despite the novelty of our research, it is not without its limitations. One limitation was our sample size, which was small due to difficulties with recruitment of couples. While challenge/threat differences are typically moderate to large because of their within-person measurement, the sample size was potentially too small to detect small effects if emotional invalidation (or partner emotional invalidation) had a small direct effect on cardiovascular stress during a relatively short discussion (6 minutes). Furthermore, our demographic was also a limitation, with our sample primarily being young adults living on or near the university campus. However, these relationships were reasonably established (relationship length = 3.81 years, $SD = 5.456$), with the overwhelming majority (78%) of couples reporting that they were in long-term committed relationships. Nonetheless, the conversations young adults have with their partners may differ qualitatively to older couples in established relationships.

Another limitation was the type of positive event and disclosure used in the capitalisation discussion. Participants were told to reflect and talk about a positive event that they had not yet shared with their partner. The flexibility with the prompt meant we were not able to control for the time that has passed since the event. Due to the difficulty experienced by some when having to choose a positive event, they were allowed to talk about past or

future events. Some expressed positivity or enthusiasm about future events, some spoke about past events, and some misunderstood the prompt entirely (i.e., did not pick a specific event or spoke about something their partner already knew about). This could have influenced the novelty of the event and their perceptions of the capitalisation attempt, as they might experience less physiological arousal or lower self-reported responsiveness if they know their partner already knows the positive news. Similarly, one person's idea of a positive event might be different to another person's, and may elicit different enthusiasm or positivity from their partner. For example, talking about getting recognised and promoted due to hard work might produce a stronger reaction from both the actor and partner, in comparison to buying a new t-shirt. Future research could mitigate these limitations by providing a self-selected list of topics for couples to choose from, as other studies have done (e.g., conflict studies; Lopes et al., 2020), and potentially ensure it is the same type of event.

Another limitation is the nature of the discussion and its time constraint. Conversations with partners are not usually timed, whereas in the experiment they each had three minutes to take turns discussing their positive events. For them both to talk about their positive event, if there was overrunning of time with one partner, they were interrupted and the other was asked to discuss their topic. We structured the discussion this way to reduce fatigue effects of the conversation as well as with the discomfort of having the physiological sensors on. Consequently, it has been shown that time pressure can elicit stress (Sharma & McKenna, 2001). We tried to counteract this by giving participants the opportunity before the discussion to write a prompt about what they were going to talk about and making them aware of how much time they had at the beginning. Future research could explore positive self-disclosure in a more naturalistic setting or qualitatively, whereby they are interviewed and have more time to talk about how they behave in their relationships/with their partner.

This might overcome the time barrier to an extent and allows for free-flowing conversation without potential interruption from the experimenter.

Conclusion

With capitalisation fundamentally being an interdependent process and important for satisfying relationships, we believed there were circumstances in which people are stressed by emotional expression due to the impact growing up in emotionally invalidating environments has. Unfortunately, our findings show that those who grow up in this environment do not find capitalisation discussions threatening or have negative evaluations of their partners responsiveness. Despite the lack of findings in this chapter, there are still important considerations for how people with histories of emotional invalidation behave in their relationships, demonstrating that the focus may be on the person-level emotion regulation consequences of emotional invalidation.

Chapter 6: General Discussion

Thesis overview

Emotional invalidation in childhood has a direct impact on how children behave in terms of feeling less trusting of their emotions and the belief that they cannot express them. Furthermore, it has been shown to have important outcomes for how one views themselves, how one regulates their emotions and attitudes towards emotion (Cano et al., 2024; Hope & Chapman, 2019; Haslam et al., 2012). These important consequences continue or are evident into adulthood and consequently taint our most important adult relationships. There has been ever-growing literature looking at the outcomes of emotional invalidation and interpersonal consequences, but there has been limited exploration outside of a clinical context (e.g., Gonçalves, et al., 2020) or beyond broad relational outcomes (e.g., Huxley, Seaton & Grenyer, 2021). In this thesis, we explored the impact of emotional invalidation on key relationship maintenance behaviours (i.e., forgiveness, capitalisation and gratitude) in close relationships and how this association can be better explained by dispositional traits (e.g., self-control, emotional reactivity, adult attachment style). This chapter will synthesise the main findings from each study, discuss key themes that emerged across all studies, critically evaluate the limitations and discuss implications and directions for future research.

Main findings

This thesis comprises of eleven empirical studies, with the first three chapters focusing on histories of emotional invalidation and self-reported relationship maintenance behaviours (i.e., forgiveness, capitalisation and gratitude) and the final exploring capitalisation processes dyadically between couples, as measured by cardiovascular responses.

In Chapter 2, we explored emotional invalidation and forgiveness in close relationships, as shown in three cross-sectional studies as well as exploring the underlying emotional mechanisms that could explain this association. As predicted, we found consistent evidence that people who recalled emotional invalidation in childhood were more likely to struggle with forgiveness of close other in adulthood. Notably, emotional invalidation was associated with more avoidance and vengeance motivations (Studies 1-3), and less benevolence motivations (Studies 1 & 2 only), when recalling past transgressions or imagining future ones. Furthermore, we found that these associations were best understood through the indirect effects of negative emotional reactivity and low self-control. People who experienced emotional invalidation in childhood were more likely to experience reactivity to negative emotions, which was subsequently associated with poor trait self-control, and less forgiveness (Study 1 and 3).

These findings build on past work by illustrating how childhood experiences with emotional invalidation can have important consequences for emotion regulation later in life by influencing interpersonal processes such as forgiveness (e.g., Krause et al., 2003; Shenk & Fruzzetti, 2011; Hope & Chapman, 2019; Reeves, 2007). Additionally, our findings suggest that emotional invalidation has several negative consequences for the self. We have extended previous literature by exploring self-control (e.g., self-criticism; Naismith, Zarate Guerrero & Feigenbaum, 2019) and provided insight into how the consequences of invalidation in childhood go beyond processes associated with emotion regulation but also self-regulation (i.e., exhibiting less self-control).

In Chapter 3, we explored emotional invalidation and capitalisation, using four studies (3 cross-sectional and one experimental) and whether the underlying emotional mechanisms that could explain this association (Study 4 & 5) and if individual differences in emotional invalidation influenced others capitalising with them (Study 6 & 7). Contrary to our

predictions, we found inconsistent evidence that people who recalled emotional invalidation in childhood were more likely to struggle with sharing positive news with a close other in adulthood (direct effects only evident in Study 5). However, across Study 4 & 5, we did find consistent evidence that the association was best understood through the indirect effects of negative attitudes towards emotional expression, specifically fear of social rejection. People who experienced emotional invalidation in childhood were more likely to hold negative attitudes towards emotional expression due to fear about their emotions being rejected, which was subsequently associated with less capitalisation. We have complemented the growing literature on how emotional invalidation impacts emotion (e.g., Caskey, 2022; Shenk & Fruzzetti, 2011; Haslam et al., 2012) but specifically attitudes towards emotional expression in a relationship context. Past work has found that emotional invalidation can cause interpersonal dysfunction (e.g., conflict; Lombardo, Waters & Elzy, 2023) and negative perceptions of a partner's support (Elzy, Keaton, Bogus & Raymond, 2024). Our findings from Study 4 & 5 extend this research by illustrating how emotional invalidation negatively impacts specific prosocial behaviours (i.e., capitalisation).

In Study 6, we found support that perceptions of someone's emotional invalidation in childhood predicted a lower likelihood of sharing good news with that person. However, in the context of a romantic partner, there was no support for whether perceiving them to have been invalidated in childhood would influence whether they shared positive news with them (Study 7). Our findings partly extended literature that shows how individual differences (e.g., low self-esteem, adult attachment anxiety; Smith & Reis, 2012; Shallcross et al., 2011) influences whether others will capitalise with you, by demonstrating this in the context of emotional invalidation (Study 6 only).

In Chapter 4, we explored emotional invalidation and gratitude, using three studies (i.e., two cross-sectional and one dyadic). Our findings in Study 8 did not support our

hypotheses, such that there was no direct association between emotional invalidation in childhood and feeling grateful for or expressing gratitude to a romantic partner. However, in Study 9, we found direct support for emotional invalidation and feeling like their partner was grateful or appreciative of them, in alignment with our hypotheses. However, contrary to our predictions, there was no support between one's own emotional invalidation and whether they reported their partner expressed their gratitude to them. When exploring the indirect effects of adult insecure attachment, only avoidant attachment mediated the association in Study 8; with emotional invalidation leading to less felt and expressed gratitude. In Study 9, both anxious and avoidant attachment mediated the relationship, with experiences of emotional invalidation meaning individuals were less likely to perceive feelings and expressions of gratitude from their partner. Contrary to our hypotheses, the dyadic effects in Study 10 were not supported; there were no actor or partner effects for emotional invalidation negatively predicting expressed gratitude to a romantic partner.

The findings in Chapter 4 have extended existing research on the impact of emotional invalidation and negative outcomes in adulthood (e.g., fear of abandonment and avoidance of intimacy; Gonçalves et al., 2021) as characterised an insecure adult attachment. Our findings have some important implications for both emotion and relationship research. It is clear that attachment plays a large role in the relationship between emotional invalidation and gratitude, which is no surprise considering the negative influence insecure attachment has shown to have on gratitude (Vollmann, Sprang & van den Brink, 2019). Finally, we have built on previous work by illustrating how emotional invalidation in childhood can have important consequences for relational processes such as gratitude, albeit it primarily through insecure attachment.

In Chapter 5, we conducted a dyadic experiment exploring whether people experience cardiovascular stress (i.e., challenge or threat) when sharing positive news with a partner

based on their own histories of invalidations, as well as their partners' histories (Study 11). Contrary to our hypotheses, we did not find support for emotional invalidation predicting cardiovascular threat (i.e., maladaptive response), with neither actor nor partner effects being evident. Furthermore, there was no support for actor or partner effects of emotional invalidation predicting perceived discussion success (i.e., partner responsiveness). Our findings were not in alignment with literature that shows how emotion regulation (e.g., suppression; Peters & Jamieson, 2016) or experiences in childhood predicts cardiovascular threat, or heightens physiological responses (Feeney & Kirkpatrick, 1996). Furthermore, we did not support previous literature in capitalisation context (Shrout et al., 2023; Kaczmarek et al., 2022). Finally, our findings did not extend the literature that shows there are individual differences influenced capitalisation in a dyadic context (e.g., low self-esteem and insecure attachment; Smith & Reis, 2012; MacGregor & Holmes, 2011; Shallcross et al., 2011) or perceived responsiveness of capitalisation attempts (Kırimer-Aydınlı & Sümer, 2024).

Across all chapters, our findings demonstrate multiple relationship maintenance behaviours that can be impacted by emotional invalidation, through its disruption of emotion regulation and working models of self. Despite some of hypotheses not being supported across some of the chapters, our findings still have important implications for the understanding of how negative experiences in childhood translates into adult relationships. It has only been in recent years that there has been literature exploring the impact these experiences have interpersonally, usually in the form of difficulties and dysregulation, low relationship satisfaction and quality (Selby et al., 2008; Brandão, 2024; Elzy, Keaton, Bogus & Raymond, 2024). Theoretically, we have provided empirical support for the biosocial theory (Linehan, 1993; Sauer & Baer, 2010) and the growing literature that shows emotional invalidation impacts the general population (e.g., Huxley, Seaton & Grenyer, 2021).

Implications of the current research

Several themes emerged across the chapters. One key implication is that there is robust evidence for differences in prosocial behaviours that are triggered by negative events, versus those that are triggered by positive events. Notably, forgiveness typically occurs after a transgression - something that is inherently negative. As discussed in Chapter 2, this requires balancing very explicit motives (i.e., self-protection and reconnection). While capitalisation and gratitude expressions can evoke the same tension (e.g., self-protection against the disclosure not being well received), the context they are being expressed in is typically not one that is risky. For example, when a partner has behaved positively, this makes gratitude expression to them seem less costly because the partner has previously been responsive. Similarly, disclosing something positive is not inherently costly; only if there is anticipation of it going poorly. This highlights that experiences with invalidation may be more salient in risky interpersonal situations - when the risks of connection and motivations for self-protection have already been upregulated and tension between emotions is likely to be more explicit (i.e., feeling negative about what happened versus the desire to make it right).

Additionally, in Chapter 2 and 3 the mechanism of emotion strongly influenced the relationship between emotional invalidation and the relational process (i.e., forgiveness and capitalisation). However, the mechanism was different for both, with emotion regulation, but in different forms, playing a vital role in the association between emotional invalidation and said relational processes. For forgiveness, it was primarily negative emotional reactivity whereas for capitalisation, it was primarily negative attitudes towards emotional expression. As forgiveness occurs after something negative has happened, residual feelings of hurt and resentment may still be evident, and as such the negative emotion is unresolved. If they are not forgiving (i.e., avoidance and vengeful motivations), these negative feelings are

still intense, strong and ongoing. In contrast, capitalising involves the decision to express something positive and therefore if you have the belief that emotions should be kept to yourself, then you are less likely to express positive emotions at all.

Another interesting theme that arose was the role of impression or perception of the measured relationship maintenance behaviour. Impressions of own disclosure for capitalisation was measured in Chapter 2, and perceptions of a partner's capitalisation attempt (Chapter 5) and gratitude experience (Chapter 4) was explored. In Chapter 2, we found that people who had experienced emotional invalidation were more likely to feel negative emotions (i.e., uncomfortable, uneasy and bothered) when writing their capitalisation letter (only evident in Study 4 & 5). In relation to people's perceptions of their partner, in Chapter 4, we found that emotional invalidation in childhood was negatively associated with perceived felt gratitude from their partner (i.e., they felt like their partner was not appreciative or grateful for them). In contrast to our hypothesis, people did not have more negative evaluations of their partners capitalisation attempt in Chapter 5. This is an interesting distinction as in the context of capitalisation, people who have experienced emotional invalidation feel worse or more negatively about their own attempt and not their partner's whereas with gratitude, their negative evaluation is with their partner rather than themselves.

Another important point is that those that have been emotionally invalidated report engaging in these prosocial behaviours to a lesser extent—they report relatively less forgiveness (Chapter 2), relatively less capitalisation, and feel relatively more uncomfortable in their self-reports (Chapter 3), compared to people who have experienced less emotional invalidation. However, histories with emotional invalidation does not appear to be associated with how threatening or challenging people find capitalisation when they do engage in it, as shown in Chapter 5. This provides a clear distinction between how people believe they are

versus how they actually behave in real situations, therefore it not reflecting their beliefs or predictions about themselves. Furthermore, there was no evidence in this thesis of dyadic consequences of emotional invalidation (Study 10 & Study 11), which highlights that there could be downstream consequences on prosociality but that the real focus needs to be on the person-level emotion regulation consequences (e.g., fear of rejection, emotion suppression) of emotional invalidation.

Despite some of the inconsistencies across chapters, our findings have important implications for the broader understanding of how life histories shape experiences in adulthood. Our findings suggest that experiences with invalidation early in life may also have important consequences for other different facets of interpersonal life (e.g., navigating conflict, willingness to sacrifice, providing emotional support). Specifically, it provides a broader idea of the relational processes' invalidation in childhood effects; not just difficulties and dysregulation but specific ways individuals interact and view their partner. Although this thesis focuses on three relationship maintenance behaviours influenced by emotional invalidation, the interdependent nature of relationships means that people are frequently required to navigate tensions between self-protection and prosocial goals across both positive and negative interactions (Holmes, 2002; Murray et al., 2008). This highlights the importance of addressing emotional invalidation in childhood from a prevention and intervention perspective. Specifically, it is important to consider how experiences of emotional invalidation can be prevented - and when it has already occurred - what forms of intervention could be effective in supporting relationship functioning.

In terms of preventative measures, exploring the negative impacts that past treatment can have on adulthood processes in close relationships consolidates the importance of parental emotional validation and awareness for their children in real time. This research is particularly relevant for parents and how they raise their children, and the impact of

this. Previous literature detailed in the introduction supported that being validating and reacting well to children's emotions is good for their emotional awareness (Eisenberg, Fabes, & Murphy, 1996) and emotion regulation (Lunkenheimer, Shields, & Cortina, 2007). Furthermore, teaching parents and different services that directly work with children the importance of validating of children has been shown to be important (Lambie & Lindberg, 2016; Lambie, Lambie, & Sadek, 2020). The consequences of validation of children's emotion goes beyond the family environment and into other key aspects of their lives (e.g., in a school setting; Jeon & Park, 2024). Therefore, it is important to consider teaching more validating responses to children's emotions, to avoid or mitigate against the detrimental effects invalidation has.

There are consequences of emotional invalidation in childhood beyond the context of a romantic relationships, and into the next stage of life as well; caregiving practices themselves. Literature has shown the intergenerational effects of invalidation in childhood on their own children and caregiving attitudes/behaviours. Specifically, parent's experiences of emotional invalidation were linked to lower inclination to apologise to their child (Adams-Clark et al., 2022). Similarly, research has shown that both mother's and father's past experienced emotional invalidation in childhood was positively associated with current reported invalidation by their children (Lee, Keng & Hong, 2023). This also highlights a need for validation training or similar for parents to avoid invalidating their children's emotions due to the intergenerational consequences. It further highlights the importance of tackling invalidating childhood environments early as a preventative measure against the negative consequences of this experience.

The findings from this thesis hold important implications in the real-world, particularly in clinical practice. Previously, research has shown more broadly the negative outcomes of being invalidated by close others on mental health

issues (i.e., less likely to seek treatment; Wassom Simpson et al., 2022) and chronic pain (i.e., higher pain; Leong, Cano & Johansen, 2011). In terms of having a history of invalidation in childhood and the issues it clearly has on relationships, this may transfer into individual and couple therapies. The findings in this thesis show that those with these experiences are struggling with dysregulation and fear of rejection from others regarding their emotions. When these individuals are put in a therapeutic context, it is of interest to explore how they would navigate that. As such, childhood histories might have important consequences for how couples interpret and experience events in their relationships which couple's therapists may want to unpack. One particular therapy that could help and has been shown to aid those who experience dysregulation is Dialectical Behaviour Therapy (Linehan, 2015). This has shown to be effective for both individuals (Linehan, 2015) and couples (Rady et al., 2021; Kirby & Baucom, 2007), who found that DBT improved emotion regulation scores for those having marital difficulties.

Furthermore, we know from our findings that those who have experienced emotional invalidation are less likely to engage in prosocial and relationship maintenance behaviours, as an outcome. Research has also shown that those that have a history of being invalidated are more likely to be invalidating to their partner (Elzy et al., 2024). Interventions that focus on validation to counter the effects of invalidation might be beneficial. Research has shown that after validating training, partners decreased their invalidating responses in the context of chronic pain (Edlund et al., 2015) and has shown to be a good clinical intervention (Cano et al., 2018). This might help with the emotional dysregulation that occurs as a result of being invalidated in childhood. Relationships could then be used as a social support and enable people to rely on their partner more to work on issues that result from a history of invalidation together. However, it is important to note that this research has shown potential therapies work for those in clinical contexts (i.e., diagnosed with BPD), so it would be worth

considering how this would work in a non-clinical sample and how these effects could compound over time in the average population as the extremes found in a clinical sample might not be evident.

Limitations and future directions

There are several limitations in the studies as part of this thesis that are worth acknowledging. Although somewhat addressed in individual chapters, it is important to note overall limitations across all chapters.

Firstly, emotional invalidation in all but two studies (Study 6 & 7) was measured using self-report methodology; the Invalidating Childhood Environment Scale (ICES; Mountford et al., 2007). This scale is based on how individuals perceived or recalled their childhood to be – a retrospective experience. Despite research showing that recalled experiences are usually a reliable representation of what actually occurred (Hardt & Rutter, 2004), there are still instances where this might not be the case. It could be argued that it may not accurately represent the environment in which they truly grew up. Literature has shown that there are instances in which recall bias can occur when trauma and maltreatment has taken place (e.g., BPD; Ebner-Priemer, 2006) as well as if there has been a lot of time between the experience and when reporting it (Henry et al., 1994). This is important when interpreting the results of this thesis because if retrospective reports do not accurately reflect the childhood environment, the associations observed between emotional invalidation and later interpersonal outcomes may not solely reflect what actually happened.

Regardless, for this thesis, it was beneficial to measure emotional invalidation using the methodology we did because it helps to better understand the treatment that occurred during childhood in a quick and effective way (Teicher, Samson, Anderson & Ohashi, 2016), while also capturing individuals' perceptions of these experiences. Retrospectively exploring

how experiences in the past are associated with behaviours in the present is important because individuals' perceptions and interpretations of their childhood experiences are themselves psychologically meaningful. How someone remembers and understands the treatment they received from their caregivers may influence how they make sense of these experiences and, consequently, may be associated with their thoughts, emotions, and behaviours in the present. When considering different methodology, literature has also shown that there are difficulties obtaining accurate and reliable data in prospective reporting of childhood maltreatment and that retrospective reporting poses similar challenges as above (Coleman et al., 2024), demonstrating that there is no correct way to explore emotional invalidation. Future research should consider using additional methodology to complement retrospective findings (Maughan & Rutter, 1997) to get a more well-rounded view on treatment by caregivers during childhood.

Another limitation is that we collapsed maternal and paternal invalidation into an overall caregiver invalidation score (i.e., parents). We included both parents in these representations to account for the fact that most people grow up in environments with two caregivers who are shaping their emotional experiences not just a main caregiver. We were also more interested in the general emotional environment as contributed by the caregiver's dismissal or trivialisation of emotion. However, this may be a limitation as there are potential differences in outcomes dependent on who the parent is, with some literature showing a greater negative outcome from maternal invalidation than paternal (e.g., Lee et al., 2022). Furthermore, research has shown that parenting styles can change depending on the parent's gender in relation to the child's (MacDonald & Parke, 1984). Future research may benefit from separating caregivers to get a clearer picture of which caregiver may play more of a role.

In reference to the methodology, there are also potential limitations with the relationship measures we used and methodology. Some of the studies were open-ended and had no regulation (e.g., self-selected transgression in Chapter 2; self-written gratitude expression in Chapter 4). Additionally, it could be argued that some of the relationship prompts (e.g., capitalisation and gratitude) were outdated as participants were asked to “write a letter to their partner”. Although this was in alignment with previous literature (e.g., MacGregor & Holmes, 2011), future research might benefit from using a more modern approach such as a text message. Furthermore, the experimental environment in Chapter 5 was artificial due to being conducted in a laboratory and therefore did not mirror the true circumstances in which couples have a conversation or discussion. Future research may benefit from conducting this in a more naturalistic setting (e.g., qualitatively).

Another limitation was the inconsistency of targets of our relationship measures across studies. Chapters 2 and 3 explored single individuals as well as those in a romantic relationship, whereas Chapters 4 and 5 explored exclusively those in a romantic relationship. This is important to acknowledge as how one behaves in these circumstances with their close friend versus their romantic partner may differ, due to the difference in characteristics (Collins, Welsh & Furman, 2009; Moss & Schwebel, 1993; Sternberg, 1986). Unfortunately, the samples were not big enough that we could explore meaningful differences between the two groups, although we did control for target in our analyses. It might be that individuals treat their best friend differently to how they treat their romantic partner, as shown by the lack of support for Study 7 in Chapter 3.

Another limitation is that there was a lack of consistency across the studies in terms of what we were measuring. We explored similar mediating variables in the forgiveness and capitalisation chapter (i.e., emotion regulation mechanisms), but we did not explore this for gratitude. This might have made it easier to make meaningful comparisons across chapters.

Due to the strong indirect effects of negative reactivity we found in the forgiveness chapter, and the clear and consistent indirect effects of negative attitudes towards emotional expression we found in the capitalisation chapter, it might have been worth unpacking the potential emotional mechanisms that underlie gratitude, as opposed to adult insecure attachment like we did. For example, based on our findings from Chapter 2 & 3, it could be that negative emotionality (e.g., negative beliefs about emotions; Ceylan & Koç, 2026) could help explain the relationship between emotional invalidation and gratitude.

Similarly, we explored perceptions of partners in regard to the relational process (e.g., perceptions of gratitude from their partner; perceptions of the capitalisation attempt from their close other) but we did not explore perceptions of forgiveness (Chapter 2). Considering this was the chapter that had the strongest support for the direct association between emotional invalidation and its relationship maintenance behaviour, it would have been interesting to explore what individuals who had experienced emotional invalidation thought about their partner in a forgiveness context. It may be beneficial for future research to explore perceptions of forgiveness (i.e., does the transgressor believe I have forgiven them, are my motivations obvious) as well as what individuals with a history of emotional invalidation feel in regard to their own transgressions (i.e., others hold a grudge against me, they still view me positively).

For future directions, there are also many other relational processes that this thesis has not addressed that are of importance. There would also be merit in investigating other relational processes that are closely linked to forgiveness due to the significant direct association (e.g., willingness to sacrifice, accommodation and relational conflict). Based on our findings, we would expect to find that emotional invalidation would make individuals less likely to engage in accommodation, more likely to have relationship conflict and less willing to sacrifice in their romantic relationship. Literature has already explored and

found that emotional invalidation is associated with self-reported relationship conflict (Elzy, Keaton, Bogus & Raymond, 2024), but exploring this using similar methodology as Chapter 5 (i.e., cardiovascular responses or observational coding) might add more to the existing literature. Overall, this exploration might give a clearer, more well-rounded view of how emotional invalidation in childhood can influence prosocial behaviours that are triggered by negative events.

Conclusion

This research aims to contribute to existing knowledge by advancing understanding of the negative impact experiencing emotional invalidating in childhood has on interpersonal relationships. By empirically addressing the aims detailed in this thesis, our expected findings serve as the foundation for future research as well as highlights the importance of interventions in both close relationships in adulthood and parent-child contexts. Notably, identifying the unique interactions and relational outcomes associated with invalidating childhood environments will help inform marital interventions for couples who are struggling in their relationships. Likewise, these findings can also inform interventions aimed at teaching parents how to constructively respond to their children's emotions, thereby reducing the likelihood of emotional invalidation.

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Appendices

Appendix A: Chapter 2 – The impact of invalidating emotional experiences in childhood on forgiveness in close relationships.

Study 1:

Figure A.1

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition

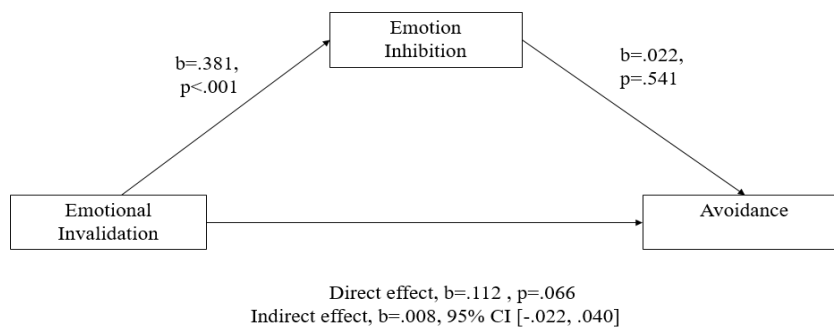


Figure A.2

Indirect association between emotional invalidation and avoidance motivations via positive reactivity

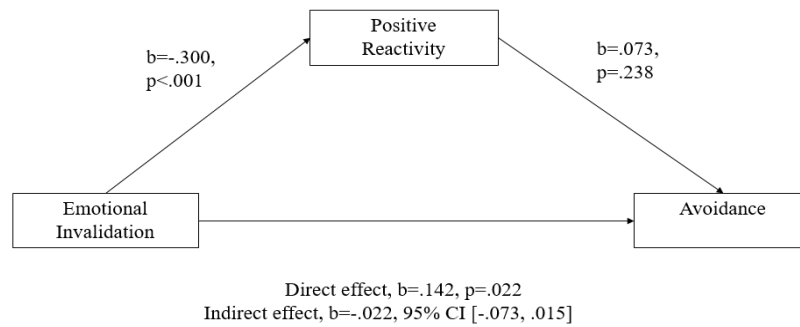


Figure A.3

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition and self-control

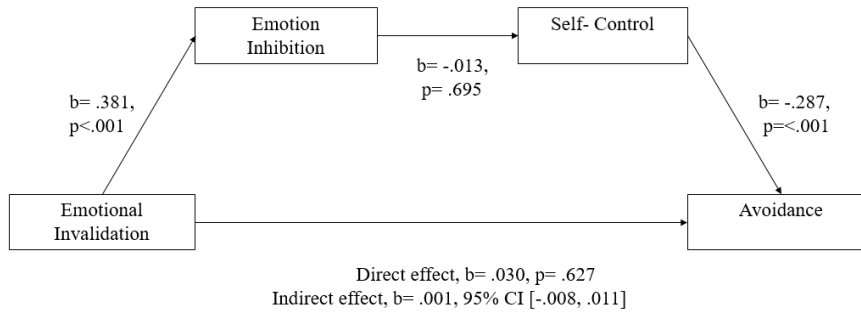


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Indirect association between emotional invalidation and avoidance motivations via positive reactivity and self-control

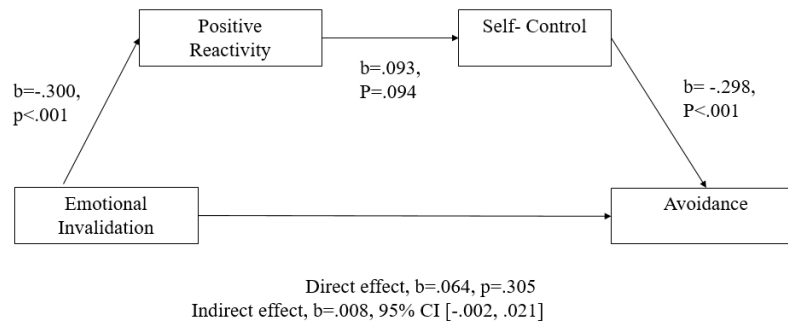


Figure A.5

Indirect association between emotional invalidation and benevolent motivations via self-control

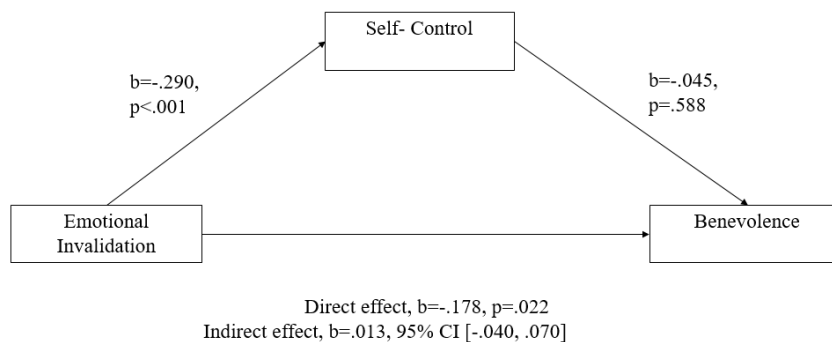


Figure A.6

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition

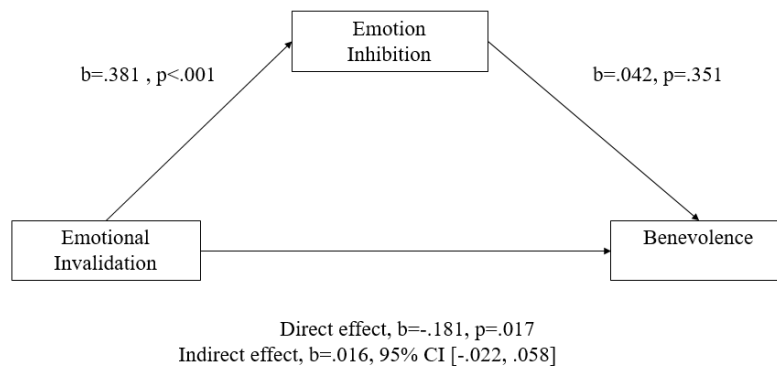


Figure A.7

Indirect association between emotional invalidation and benevolent motivations via positive reactivity

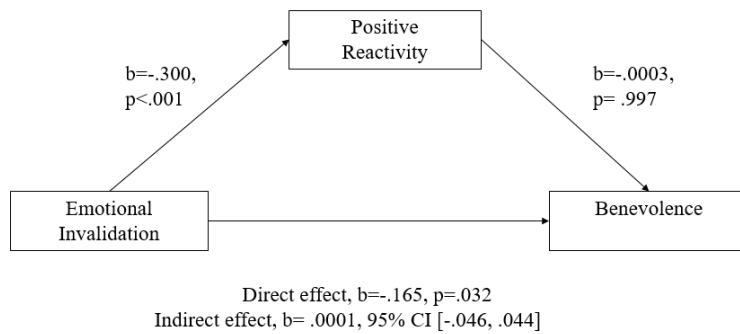


Figure A.8

Indirect association between emotional invalidation and benevolent motivations via negative reactivity

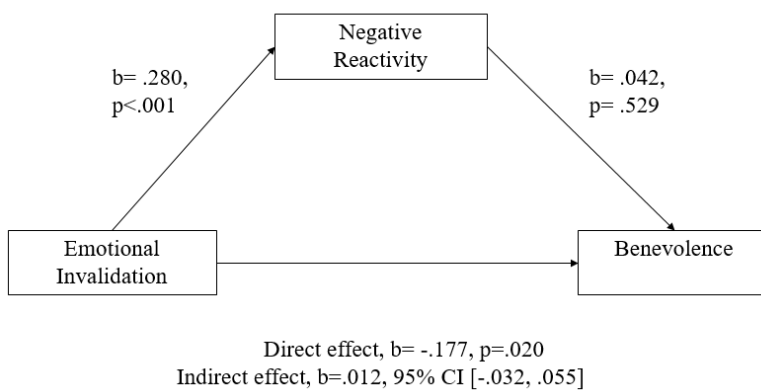


Figure A.9

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition and self-control

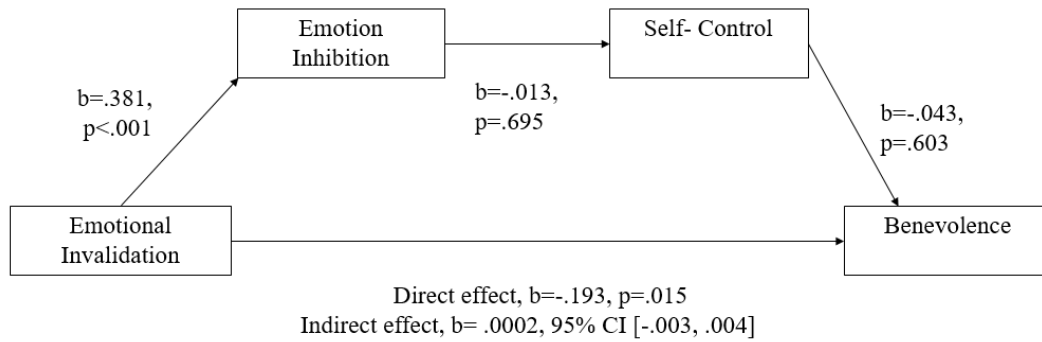


Figure A.10

Indirect association between emotional invalidation and benevolent motivations via positive reactivity and self-control

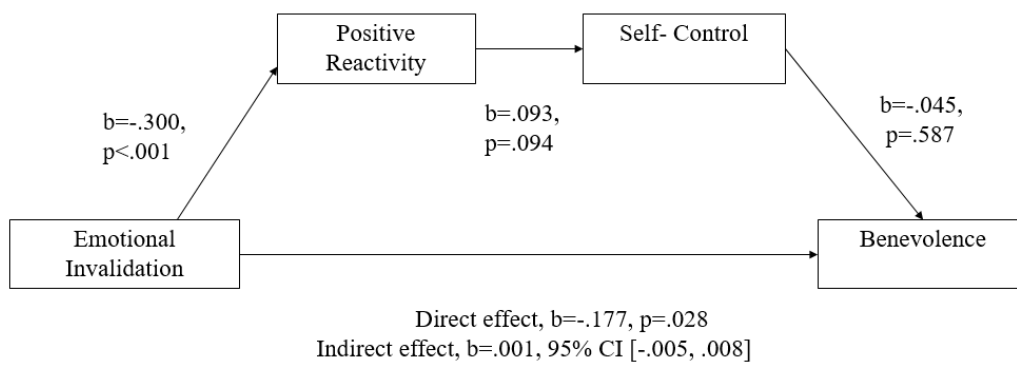
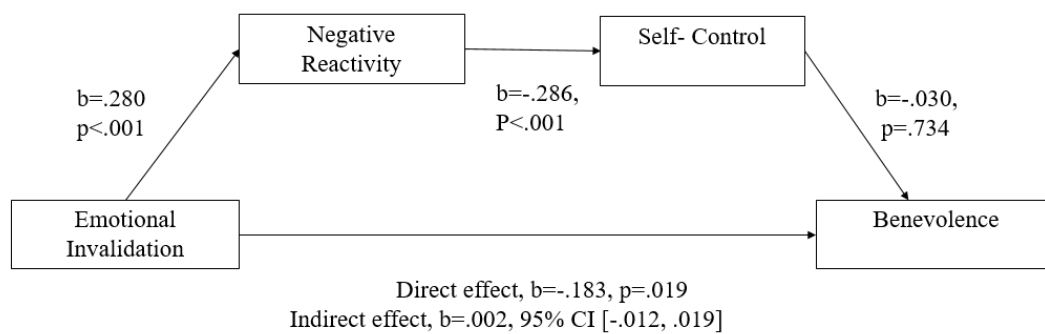


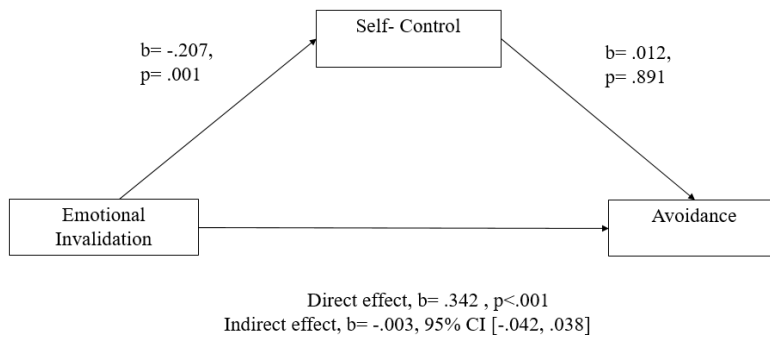
Figure A.11

Indirect association between emotional invalidation and benevolent motivations via negative reactivity and self-control

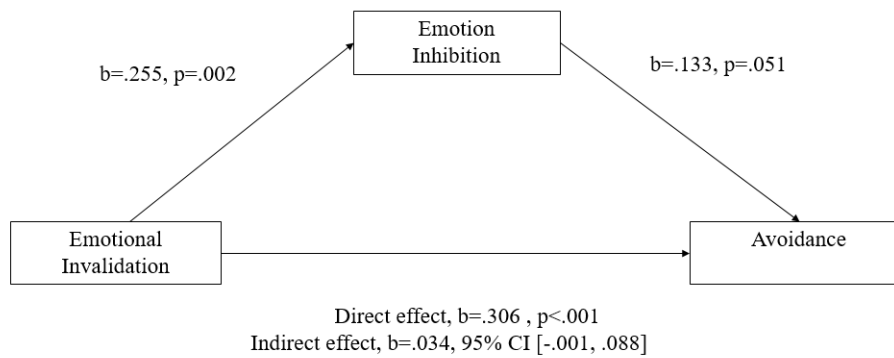


Study 2:**Figure A.12**

Indirect association between emotional invalidation and avoidance motivations via self-control

**Figure A.13**

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition

**Figure A.14**

Indirect association between emotional invalidation and avoidance motivations via positive reactivity

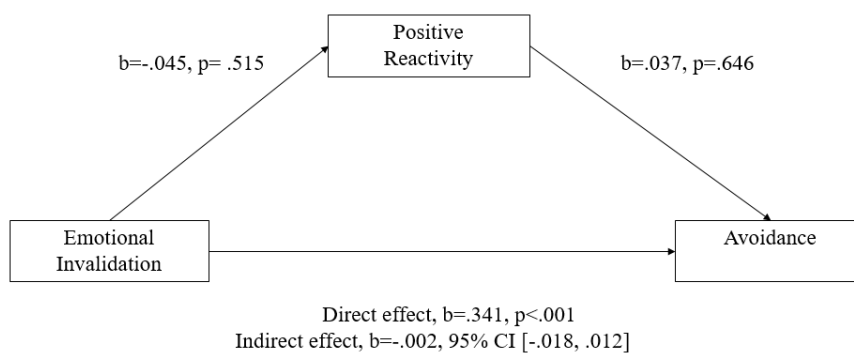
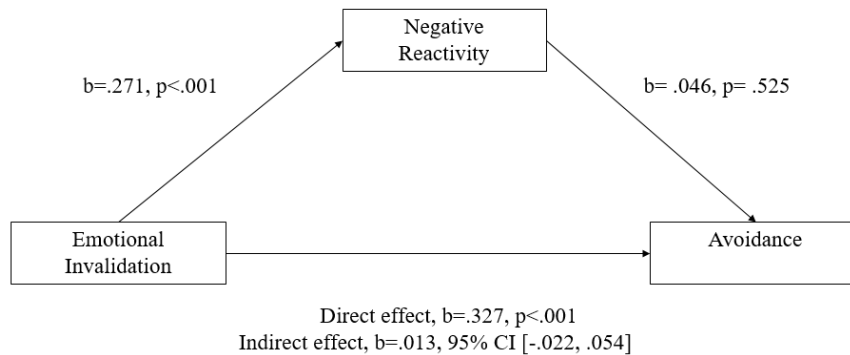
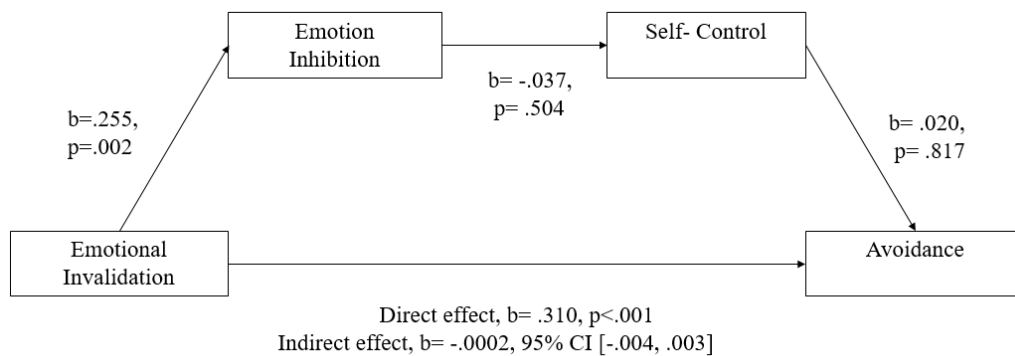


Figure A.15

Indirect association between emotional invalidation and avoidance motivations via negative reactivity

**Figure A.16**

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition and self-control

**Figure A.17**

Indirect association between emotional invalidation and avoidance motivations via positive reactivity and self-control

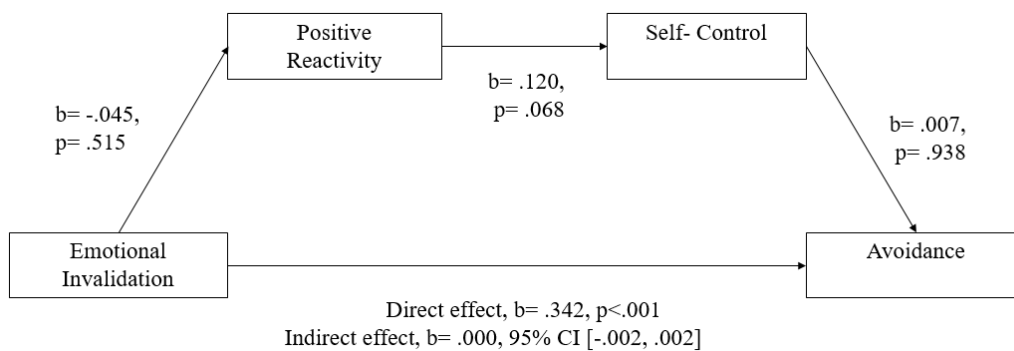
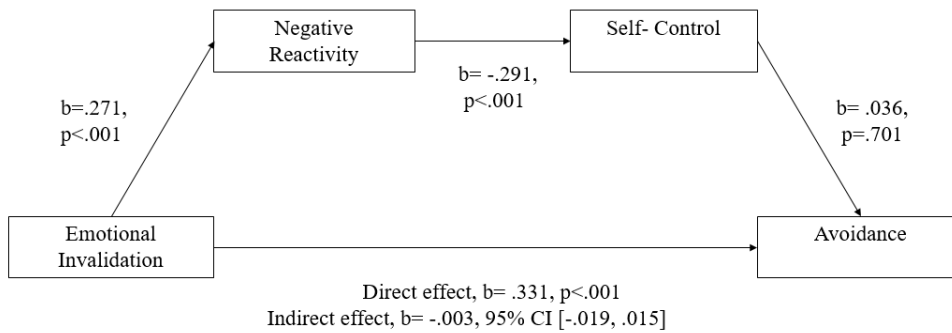
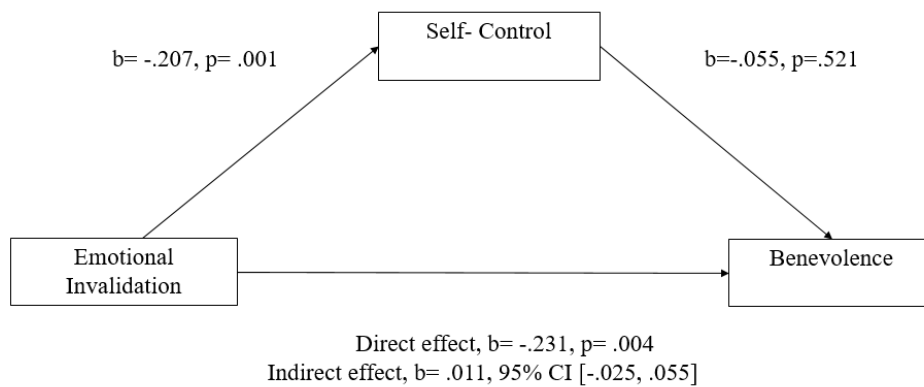


Figure A.18

Indirect association between emotional invalidation and avoidance motivations via negative reactivity and self-control

**Figure A.19**

Indirect association between emotional invalidation and benevolent motivations via self-control

**Figure A.20**

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition

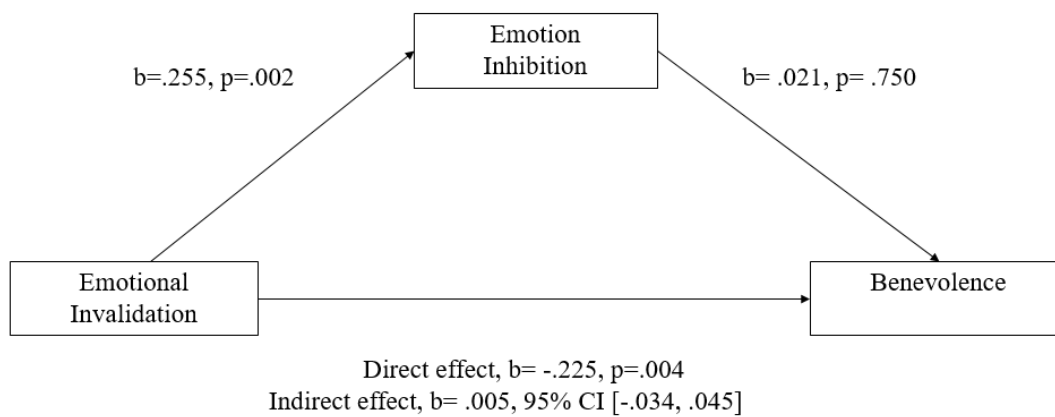
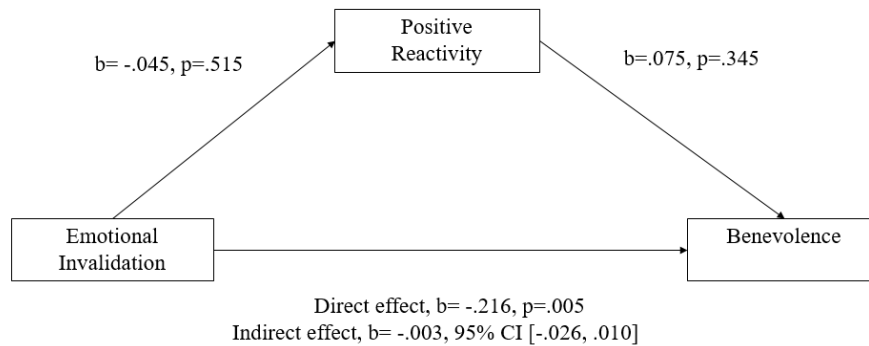
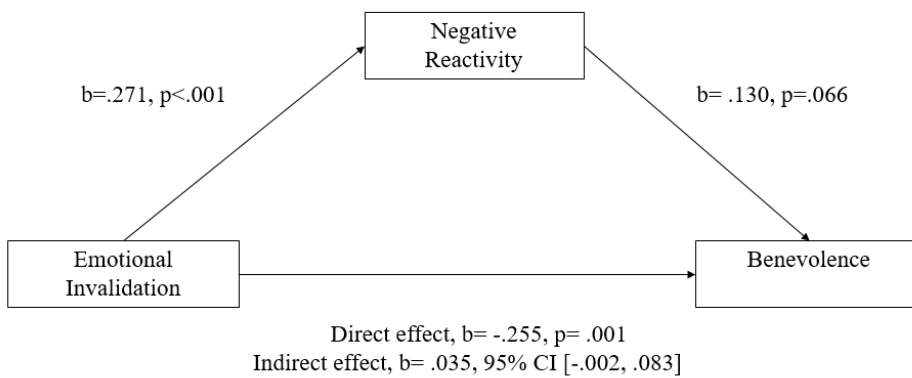


Figure A.21

Indirect association between emotional invalidation and benevolent motivations via positive reactivity

**Figure A.22**

Indirect association between emotional invalidation and benevolent motivations via negative reactivity

**Figure A.23**

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition and self-control

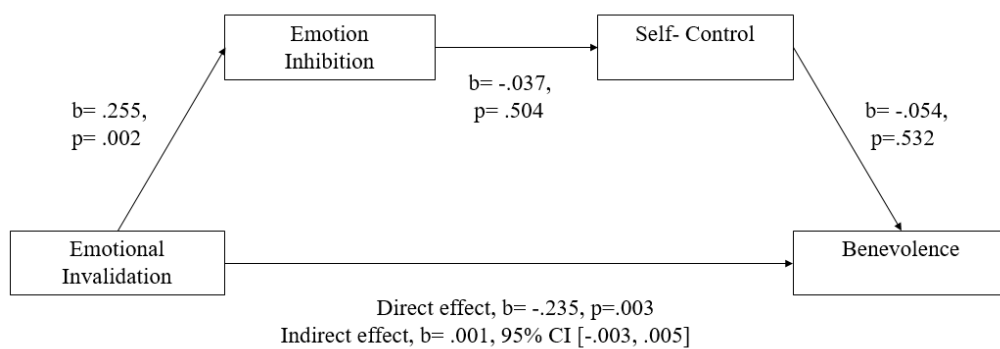
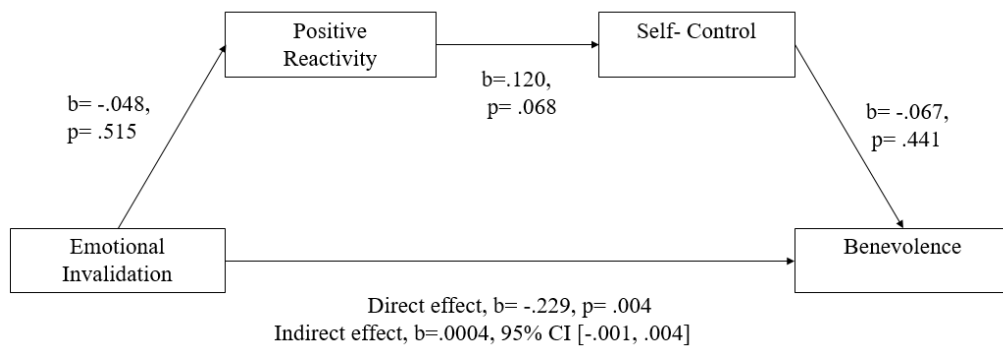
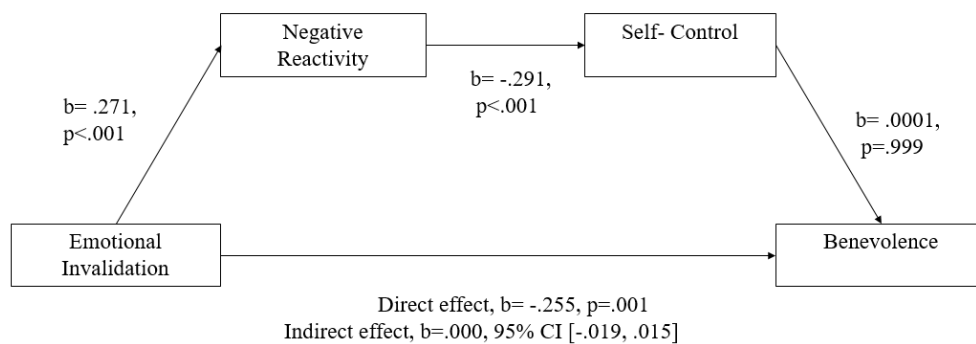


Figure A.24

Indirect association between emotional invalidation and benevolent motivations via positive reactivity and self-control

**Figure A.25**

Indirect association between emotional invalidation and benevolent motivations via negative reactivity and self-control

**Figure A.26**

Indirect association between emotional invalidation and vengeance motivations via self-control

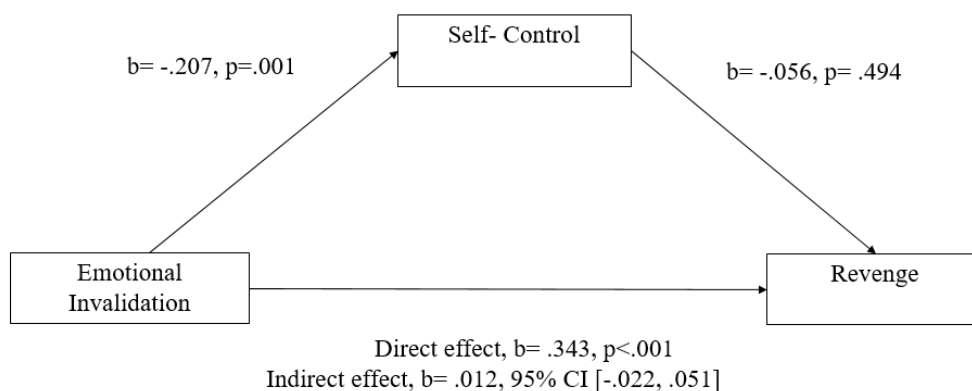
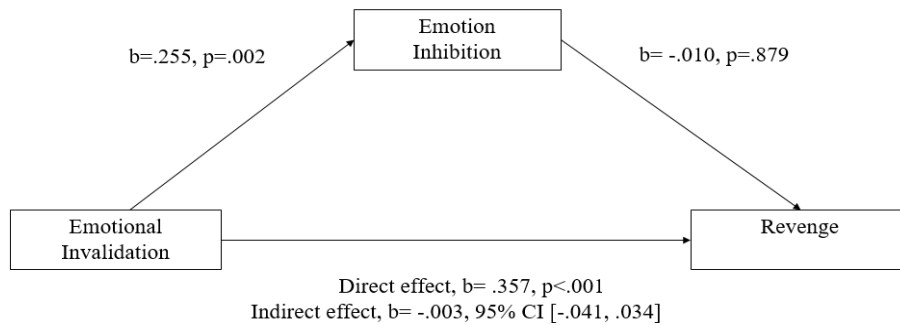
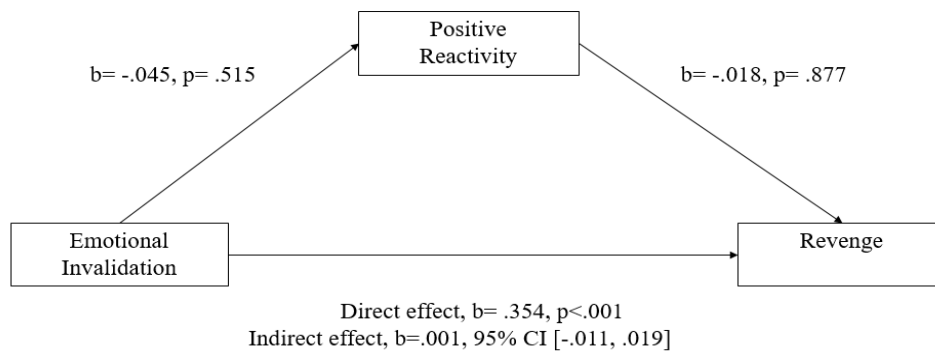


Figure A.27

Indirect association between emotional invalidation and vengeance motivations via emotion inhibition

**Figure A.28**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity

**Figure A.29**

Indirect association between emotional invalidation and vengeance motivations via negative reactivity

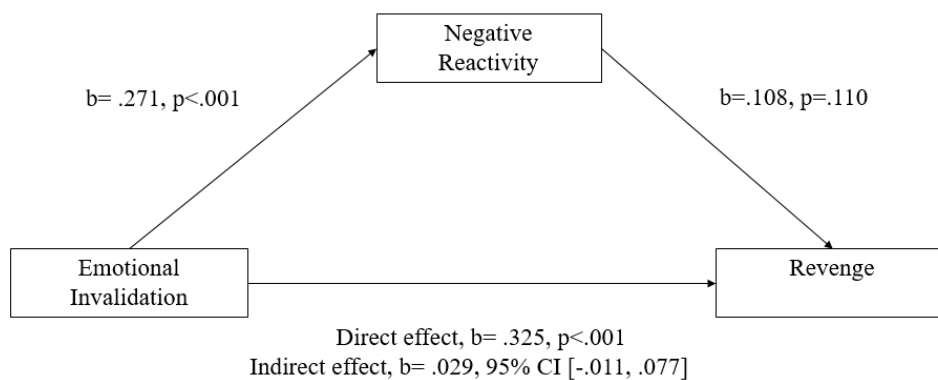
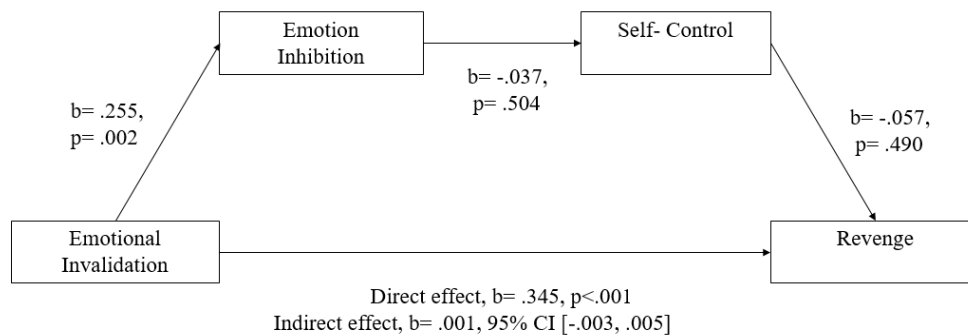
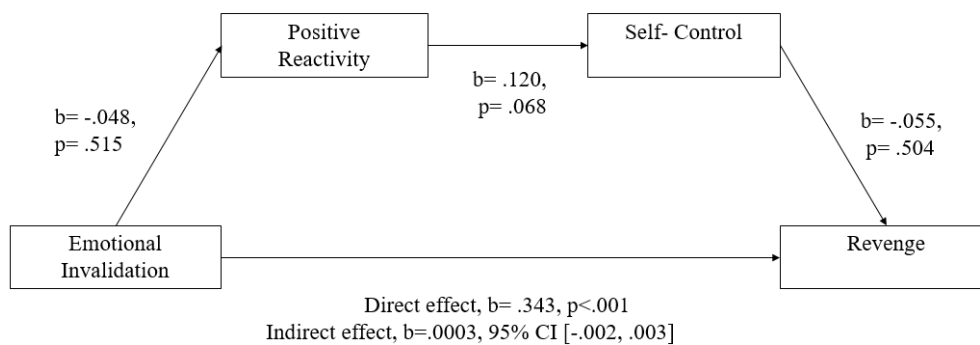


Figure A.30

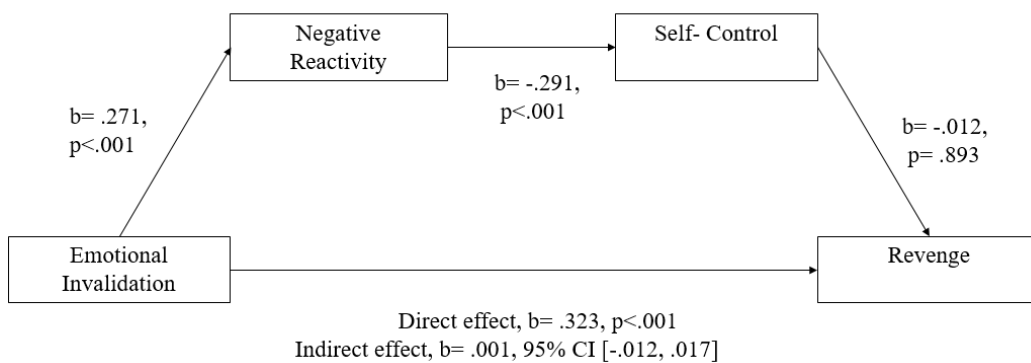
Indirect association between emotional invalidation and vengeance motivations via emotion inhibition and self-control

**Figure A.31**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity and self-control

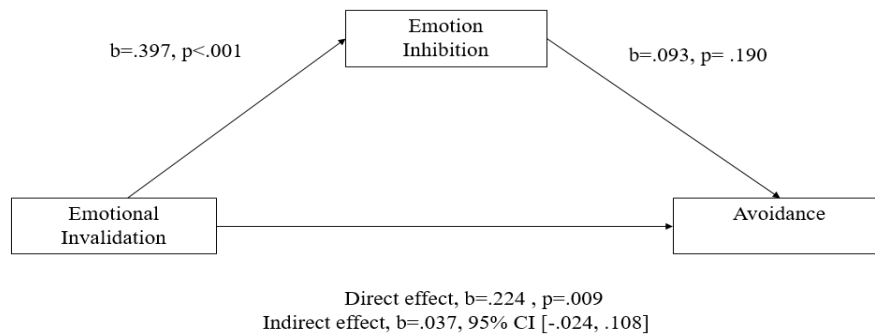
**Figure A.32**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity and self-control

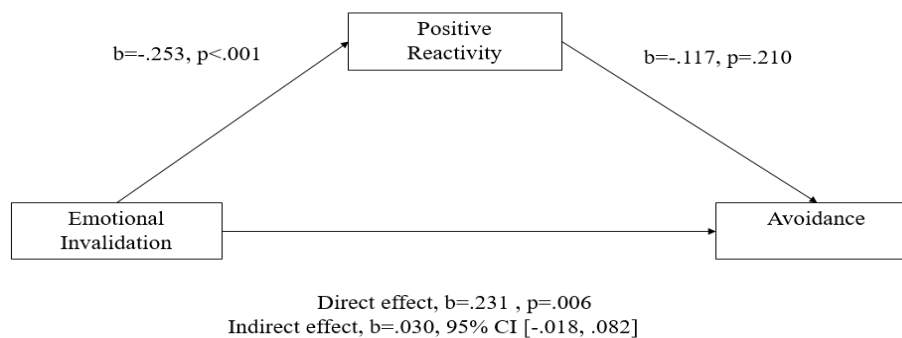


Study 3:**Figure A.33**

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition

**Figure A.34**

Indirect association between emotional invalidation and avoidance motivations via positive reactivity

**Figure A.35**

Indirect association between emotional invalidation and avoidance motivations via emotion inhibition and self-control

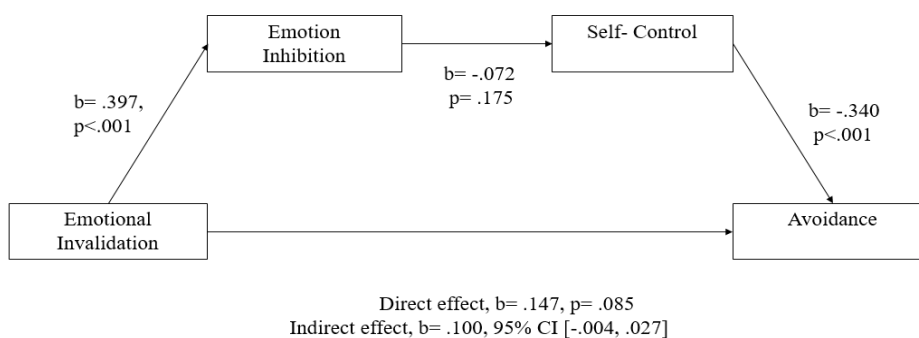
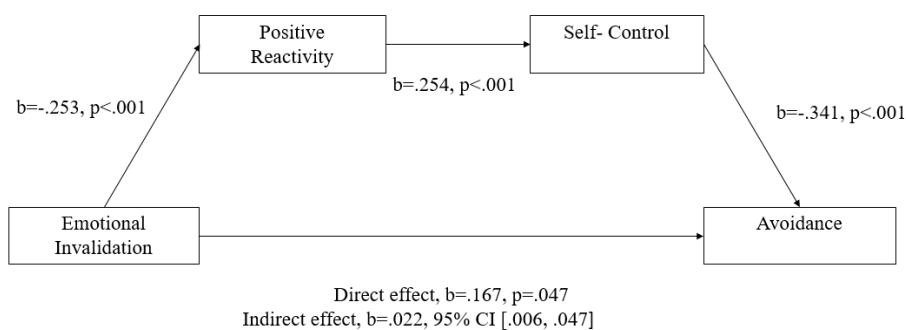
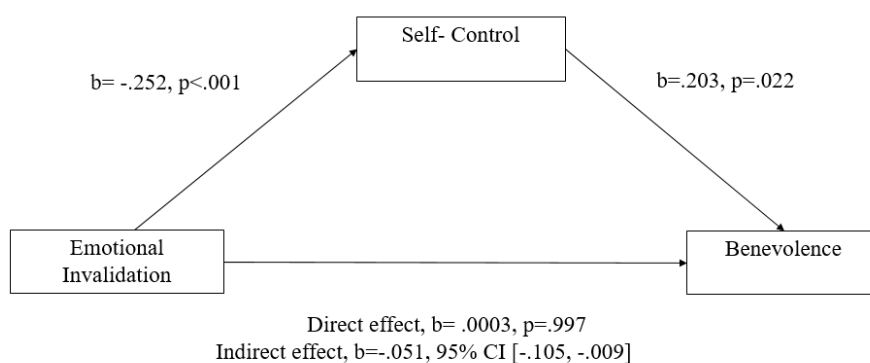


Figure A.36

Indirect association between emotional invalidation and avoidance motivations via positive reactivity and self-control

**Figure A.37**

Indirect association between emotional invalidation and benevolent motivations via self-control

**Figure A.38**

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition

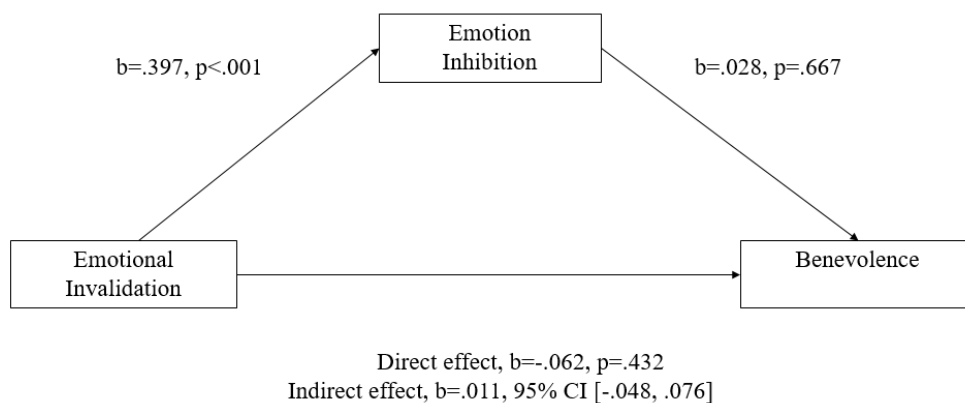
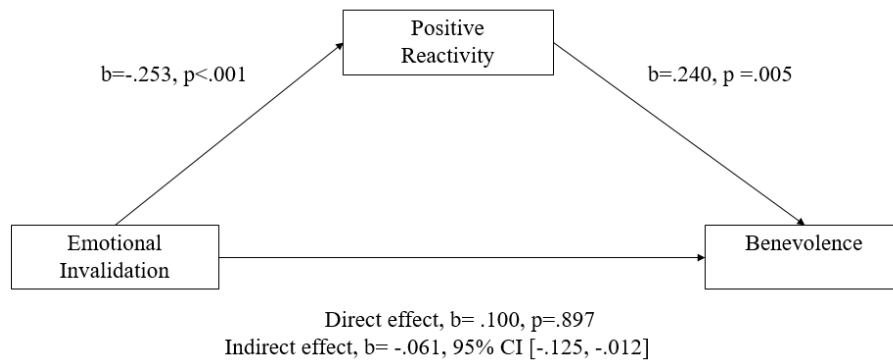
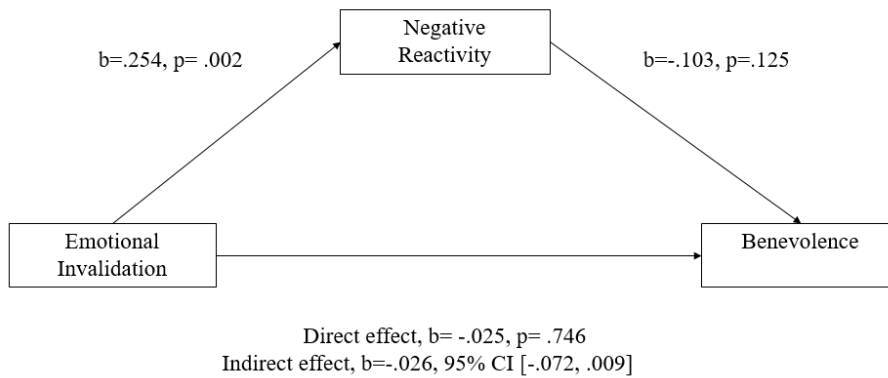


Figure A.39

Indirect association between emotional invalidation and benevolent motivations via positive reactivity

**Figure A.40**

Indirect association between emotional invalidation and benevolent motivations via negative reactivity

**Figure A.41**

Indirect association between emotional invalidation and benevolent motivations via emotion inhibition and self-control

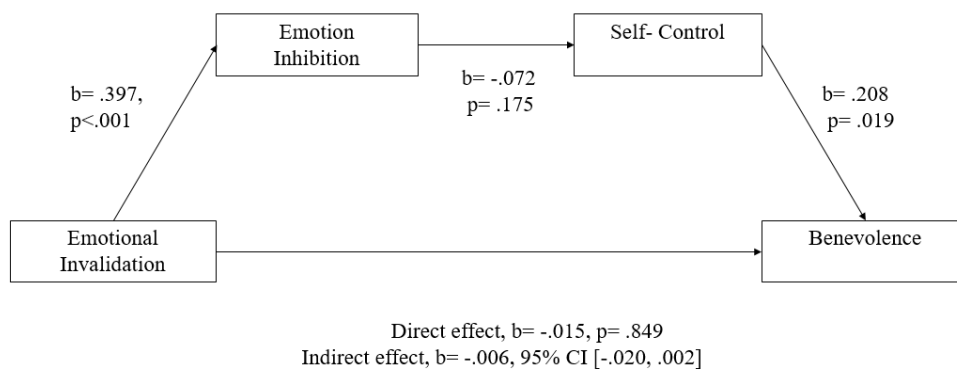
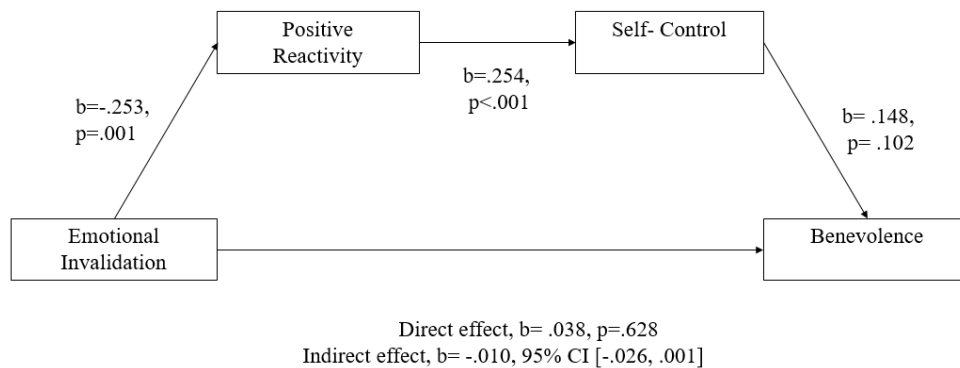
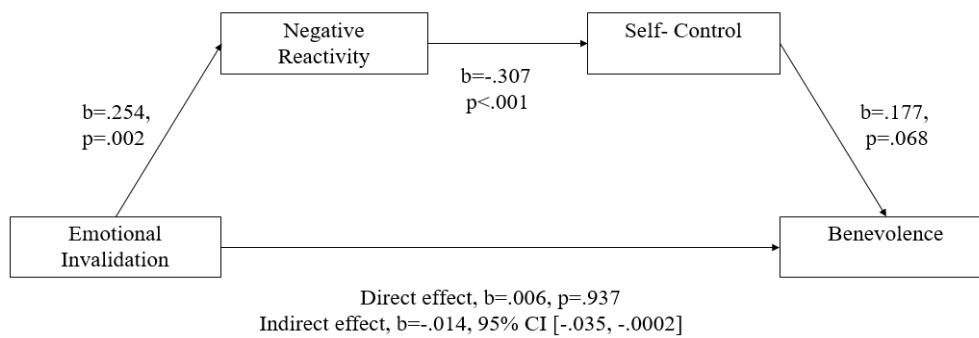


Figure A.42

Indirect association between emotional invalidation and benevolent motivations via positive reactivity and self-control

**Figure A.43**

Indirect association between emotional invalidation and benevolent motivations via negative reactivity and self-control

**Figure A.44**

Indirect association between emotional invalidation and vengeance motivations via self-control

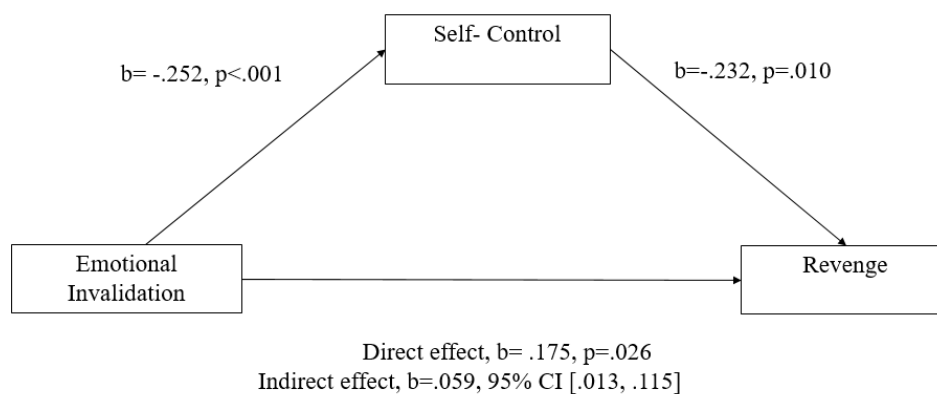
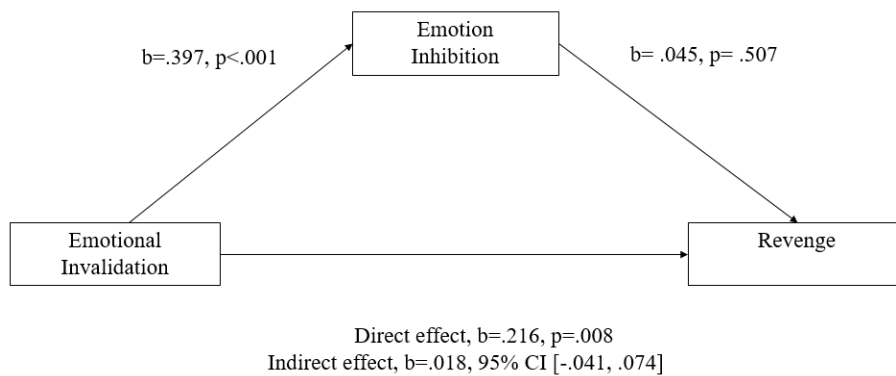
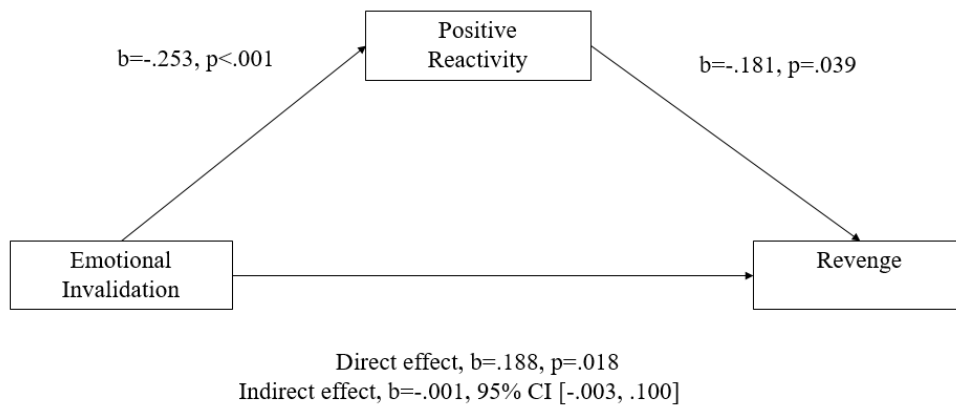


Figure A.45

Indirect association between emotional invalidation and vengeance motivations via emotion inhibition

**Figure A.46**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity

**Figure A.47**

Indirect association between emotional invalidation and vengeance motivations via negative reactivity

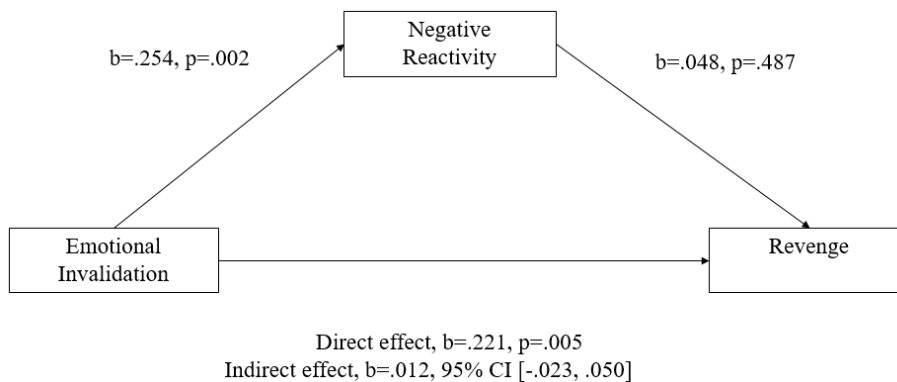
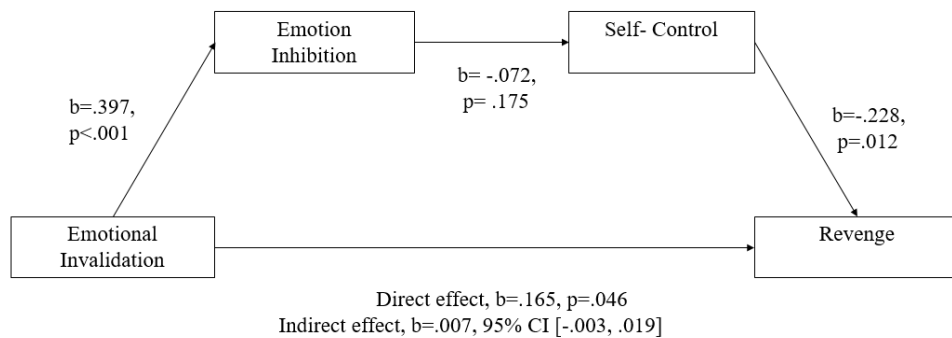
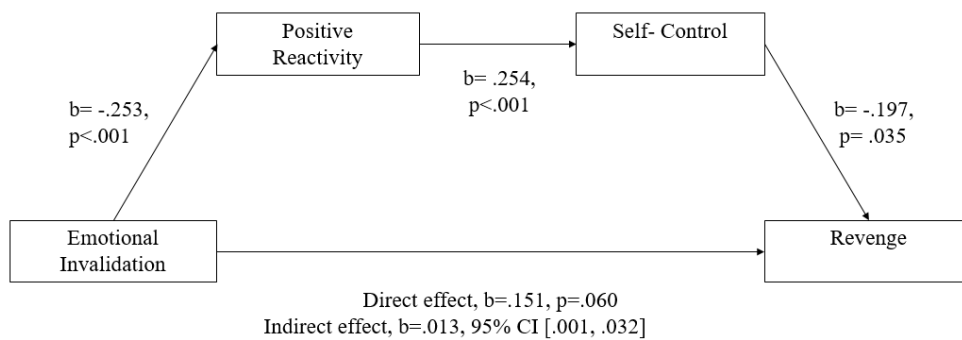


Figure A.48

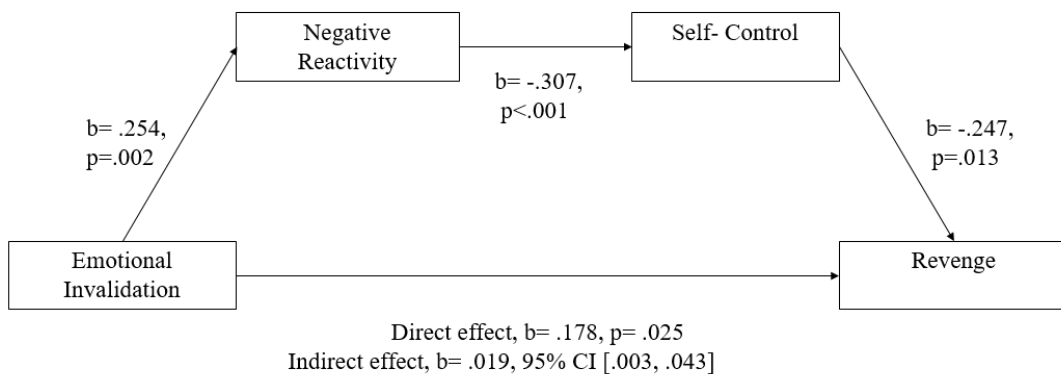
Indirect association between emotional invalidation and vengeance motivations via emotion inhibition and self-control

**Figure A.49**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity and self-control

**Figure A.50**

Indirect association between emotional invalidation and vengeance motivations via positive reactivity and self-control



Appendix B: Chapter 3 – The impact of invalidating emotional experiences in childhood on sharing positive news in close relationships.

Study 4:

Figure B.1

Indirect association between emotional invalidation and capitalisation via emotion inhibition

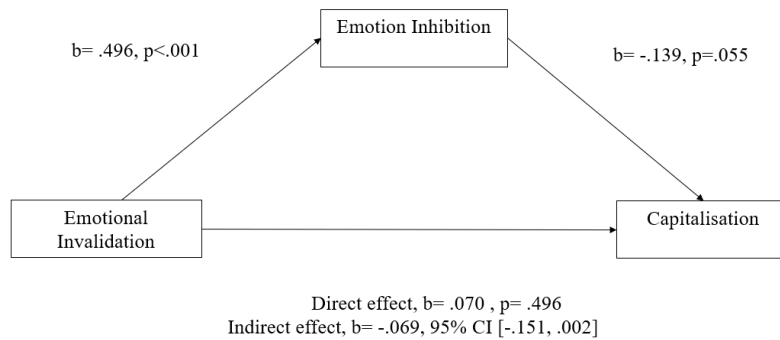


Figure B.2

Indirect association between emotional invalidation and capitalisation via positive reactivity

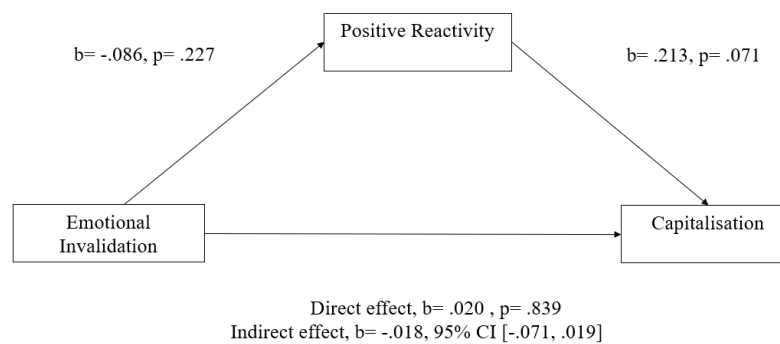
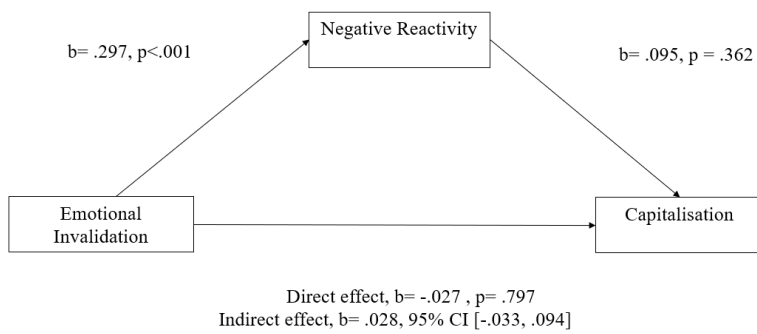


Figure B.3

Indirect association between emotional invalidation and capitalisation via negative reactivity



Study 5:

Figure B.4

Indirect association between emotional invalidation and capitalisation via emotion inhibition

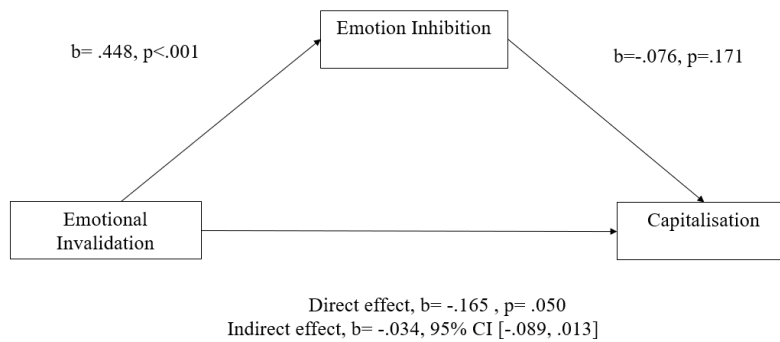
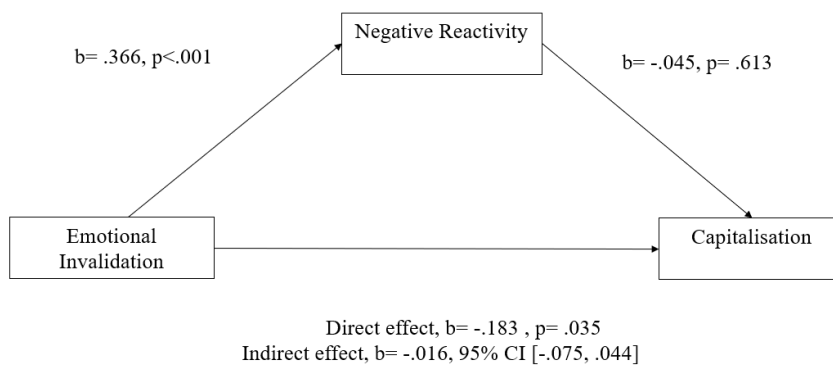


Figure B.5

Indirect association between emotional invalidation and capitalisation via negative reactivity



Appendix C: Chapter 4 – The impact of invalidating emotional experiences in childhood on expressed and perceived gratitude in romantic relationships.

Study 10:

Instructions for Gratitude Coding

You will rate the written gratitude letter responses according to each question using a 1-5 Likert scale. See below for each question, the description of the rating scales and examples to help decipher what the code the overall response.

Table C.1

Gratitude – Overall, how grateful, thankful and appreciative did the participant seem for their partner?

Code	Definition/Guidance	Examples
0 – No Gratitude	No expression of gratitude, thankfulness, or appreciation. Mentions partner or actions without any acknowledgement of benefit or emotional impact.	<i>“My partner did the dishes yesterday.”</i> <i>“She helped me with work.”</i>
1 – Minimal Gratitude	Very brief or perfunctory acknowledgment. Generic “thanks” or polite mention, little to no warmth, emotion, or elaboration.	<i>“Thanks for helping me.”</i> <i>“I appreciate it.”</i>
2 – Basic Gratitude	Clear but shallow gratitude. Names the partner and the act, with mild positive	<i>“I’m grateful that you listened to me.”</i>

	feeling or acknowledgment of benefit. Little reflection on significance.	<i>“It was nice of you to make dinner.”</i>
3 – Moderate Gratitude	Gratitude is explicit, personalized, and reasonably warm. Includes some reference to the partner’s effort or care and mild emotional expression.	<i>“Thank you for taking the time to help me — it really meant a lot.”</i> <i>“I appreciate how thoughtful you were in doing that for me.”</i>
4 – Strong Gratitude	Gratitude is clearly felt and expressed. Highlights the partner’s qualities, effort, or intention. Emotion and warmth are evident, and appreciation may extend beyond the act itself.	<i>“I’m so grateful for how much you care and went out of your way to support me.”</i> <i>“Your help made me feel truly cared for, and I really appreciate it.”</i>
5 – Deep Gratitude	Gratitude is profound, heartfelt, and relationally focused. Reflects both emotional intensity and recognition of the partner’s meaning or impact. The participant conveys enduring thankfulness.	<i>“I feel so grateful every day to have you in my life. Your constant support and thoughtfulness mean more to me than words can express.”</i> <i>“Your gesture reminded me how lucky I am to have someone who truly cares — I appreciate you so deeply.”</i>

Table C.2

Specificity – Overall, how specific was the event or behaviour to which the participant expressed gratitude?

Code	Definition/Guidance	Examples
0 – No Specific Event Mentioned	No identifiable act, event, or behaviour is referenced. Vague – no reference to a concrete action, time or context.	<i>“I’m just so thankful for you.”</i> <i>“You’re amazing.”</i>
1 – Extremely Vague Reference	Mentions being thankful “for what you do” or “everything,” but still no identifiable act. The actions of the partner are implied but not described.	<i>“Thanks for always being there.”</i> <i>“I appreciate all you do.”</i>
2 – General Category Mentioned	Refers to a type of behaviour but not a specific instance. Response indicates a general domain but not a single event.	<i>“Thanks for helping me out lately.”</i> <i>“Thanks for your support with work.”</i>
3 – Somewhat Specific	Identifies a single episode or timeframe but lacks clear details. Response mentions a time or general act but without elaboration.	<i>“Thanks for helping me yesterday.”</i> <i>“Thanks for calling me when I needed to talk.”</i>
4 – Specific Event	Describes a distinct act with contextual detail (who/what/when). Response contains clear information.	<i>“Thanks for picking me up from the airport last night.”</i> <i>“Thanks for proofreading my paper yesterday afternoon.”</i>

Clearly Identified		
5 – Highly Specific/ Vivid Description	Richly detailed and vivid reference to a unique event, including context, timing, and possibly the partner's intention.	<i>"Thanks for driving across town yesterday evening to bring me the charger I forgot — it really saved me before my presentation."</i>

Table C.3

Positivity – How much positive emotion did the participant convey in the gratitude letter/expression?

Code	Definition/Guidance	Examples
0 – None at all	Entirely neutral statement. No emotional tone, positive adjectives, or personal reaction. Reads as perfunctory or obligatory. May simply describe the act or say "thanks" without affect.	<i>"Thanks."</i> <i>"You cooked dinner yesterday."</i>
1 – Very low positivity	Slightly positive but emotionally flat. Acknowledges the act with polite or formal language but shows little genuine pleasure or warmth. Lacks descriptive or affective words	<i>"Thank you for <u>helping</u> me."</i> <i>"I <u>appreciate</u> you being there."</i>
2 – Mild positivity	Contains one or two simple positive words (e.g., <i>nice</i> , <i>kind</i> , <i>helpful</i>). Shows some mild appreciation or warmth, but emotion remains restrained or generic.	<i>"Thank you, that was really <u>nice</u> of you to do."</i>

3 – Moderate positivity	Expresses clear positive emotion. Specifies <i>why</i> the act mattered or was appreciated, using mildly expressive language (e.g., <i>thoughtful, caring, really appreciated</i>). The tone conveys genuine but measured warmth.	<i>“That was such a thoughtful gesture — I <u>really appreciated</u> it.”</i> <i>“You were so caring and it meant a lot to me.”</i>
4 – High positivity	Strong emotional tone and expressive language. Includes more vivid or emphatic words (e.g., <i>wonderful, amazing, so grateful</i>), often describing the <i>positive impact</i> on the person. Conveys heartfelt appreciation and joy.	<i>“That was such an amazing surprise — it really made my day! Thank you so much.”</i> <i>“I’m so grateful for what you did; it was incredibly kind and thoughtful.”</i>
5 – Extremely positive	Highly expressive and emotionally charged. Multiple intensifiers or superlatives (e.g., <i>so, absolutely, truly, beyond words</i>). Conveys exuberance, deep joy, or emotional uplift. The tone is vivid, enthusiastic, and heartfelt	<i>“I’m honestly overjoyed — that was incredible! You went above and beyond, and it meant the world to me!”</i> <i>“I can’t even express how happy and grateful I feel — it was perfect in every way!”</i>

Table C.4

Meaning – To what extent does the participant link the specific event or behaviour they are grateful for to their partner or relationship?

Code	Definition/Guidance	Examples
0 – None	No reference at all to the relationship, partner, or relational meaning. The focus is entirely on the act or on the self (what happened, how it helped) with no acknowledgement of who the partner is or what they mean to them.	<i>“Thanks for helping me yesterday.”</i> <i>“That was really helpful”</i>
1 – Minimal	Generic or surface-level reference to the partner, not tied to the event. The partner is acknowledged in passing (“you’re great,” “you’re nice”) but not in a meaningful way.	<i>“Thanks — you’re a good partner.”</i> <i>“You’re so nice.”</i>
2 – Basic	Simple connection between the act and the partner’s role. The participant briefly recognises that what their partner did reflects care or reliability, but there’s little elaboration or emotional insight.	<i>“Thanks for helping me — I’m glad I have you.”</i> <i>“It means a lot that you care.”</i>
3 – Moderate	Makes an explicit connection between the event and the quality of the relationship. Links the partner’s behaviour to <i>who they are</i> or to a <i>specific positive quality</i> that matters in the relationship (e.g., kindness, supportiveness, patience).	<i>“You helping me yesterday really showed how thoughtful you are.”</i> <i>“You really showed how much you care — it made me feel close to you.”</i>
4 – Strong	Behaviour reflects enduring or defining traits of the partner. Tone shows genuine reflection	<i>“You have such a gentle way of taking care of me, and it’s</i>

	and appreciation of the partner and relationship itself.	<i>something I never take for granted.”</i> <i>“You always show up for me, and it’s one of the things I admire most about you.”</i>
5 – Deep	Expresses profound relational meaning. Shows deep reflection on what the partner <i>means</i> to them or their shared connection and relationship.	<i>“What you did just reminded me how lucky I am to have you — you’re my safe place, and you always find a way to make me feel loved.”</i>

Participants may not have followed instructions and may have written vaguely about something or not really referred to the prompt. In which case, you can use the following codes:

- participant left question blank -- **999**
- participant entered gibberish (e.g., random letters) --- **998**
- participant entered real sentences, but do not relate to question --- **997**
- participant refused to answer (e.g., 'not applicable', 'can't think of answer') --- **996**
- other issue with response not specified above --- **995**

Appendix D: Chapter 5 – The consequences of childhood emotional invalidation in capitalising romantic couples: a challenge and threat perspective

Study 11:

Experiment instructions

Before the researchers left to start the baseline recording, participants then received the following instructions:

“Please try to move as little as possible during the study, especially during the discussions. With the hand that has the blood pressure cuff, please relax your arm and rest it on the table. Please also attempt not to fiddle with the blood pressure tube or accidentally place it beneath your arm as it may impact results. For the next few minutes, we will be calibrating our physiological equipment, so to you it may seem nothing is happening. You do not need to do anything during this time, just sit quietly and do not speak to each other. We will let you know when the equipment is ready and we can move on with the rest of the study, reminder this should only take a few minutes. Once complete, you will receive instructions about the start of the discussion over the intercom.”

After the baseline period, participants were told that the next portion of the experiment will start. Over the intercom, couples were given a more detailed prompt for their discussion by one of the experimenters. All couples were told the following:

“In this part of the study we would like you to each share something positive that has happened to you recently. Please think back to what you identified earlier for the prompt about ‘a positive event that you have not yet shared with your partner’. You will take turns talking about your events and you will decide who goes first. When talking about your positive event, try to talk about it in as much detail as possible. When hearing about your partner's event you are free to talk as much or as little as you wish. Try to engage in a

conversation that is as close to a normal interaction between you both. You will have 6 minutes to each discuss your positive events, but don't worry about keeping track of time. as we will let you know when time is up. If you finish your discussion before time is up, please keep going over the same points until we it's time to continue with the next part of the study. Do you have any questions? Take a moment to think quietly about what you would like to discuss and who would like to go first, while I start your physiological equipment. I will tell you when to begin"