“MÃE, PAI: DES(ENVOLVIMENTO DA)CULPA”

THE MEDIATING EFFECT OF EMOTION REGULATION IN THE RELATIONSHIP BETWEEN ATTACHMENT SECURITY AND HEALTHY GUILT

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"Well, here at last, dear friends, on the shores of the Sea comes the end of our fellowship (...). Go in peace. I will not say; do not weep; for not all tears are an evil."

J.R.R. Tolkien, 1984

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ABSTRACT.

Despite growing empirical evidence on the importance of a more comprehensive understanding of guilt owing to its role in prosociality and societal well-being, there are nevertheless many unknown aspects surrounding guilt, namely concerning the emergence and possible significant precursors of guilt such as attachment and emotion regulation. Therefore, our main objectives were to understand how attachment security to both caregivers relates to healthy guilt proneness and examine the mediating effect of emotion regulation in this relationship. We recruited 101 children aged 8 to 10 years old (50.5% girls; M_{age} = 8.99 years old, *SD* = .69) and their parents (*n* = 202). Children reported attachment security to both parents using the SSQ, and their proneness to ethical and non-ethical guilt, healthy guilt and absence of guilt, using the SERT. Parents reported their perception of their child's emotion regulation capacity, measured by the ERC. Generally, results found that attachment security to both mother and father significantly predicted reported proneness to ethical guilt [F(1.97) = 4.05, *p* =.01, R^2 = .11; F(1,97) = 3.25, *p* =.03, R^2 = .09, respectively], with attachment to the father also predicting absence of guilt [F(1,97) = 7.46, *p* <.001, R^2 = .19] and healthy guilt scores [F(1,97) = 2.62, *p* = .01, R^2 = .08]. However, although global emotion regulation scores reported by each caregiver were significantly correlated with ethical guilt (r_{mother} = .27, *p* = 0.01; r_{father} = .25, *p* = .05), no significant mediating effect of emotion regulation was found (*p* > 0.05).

Keywords: guilt; attachment; emotion regulation; middle childhood;

RESUMO.

Não obstante a crescente evidência empírica em torno da importância de uma maior compreensão da culpa dado o seu papel na prosocialidade e bem-estar social, ainda existem muitas incógnitas, em relação à sua emergência e possíveis precursores significativos como a vinculação e a regulação emocional. Nesse sentido, os objetivos principais procuraram compreender como a qualidade da vinculação aos cuidadores se relaciona com a predisposição para culpa saudável e averiguar o efeito mediador da regulação emocional nesta relação. Foram recrutados 101 crianças dos 8 aos 12 anos de idade (50.5% raparigas; M_{idade} = 8.99 anos, *SD* = .69) e os seus pais (*n* = 202). As crianças relataram a sua qualidade de vinculação aos pais utilizando o SSQ, e a sua predisposição para a culpa ética e não-ética, culpa saudável e ausência de culpa, utilizando o SERT. Os pais relataram as suas percepções da regulação emocional das crianças utilizando o ERC. Em geral, os resultados demonstraram que a segurança na vinculação à mãe e ao pai predizem significativamente predisposição para a culpa ética [F(1.97) = 4.05, *p* =.01, R^2 = .11; F(1,97) = 3.25, *p* =.03, R^2 = .09, respectivamente], com a segurança na vinculação ao pai também a prever ausência de culpa [F(1,97) = 7.46, *p* <.001, R^2 = .19] e culpa saudável [F(1,97) = 2.62, *p* = .01, R^2 = .08]. Contudo, embora os níveis de regulação emocional reportados (r_{mother} = .27, *p* = 0.01; r_{father} = .25, *p* = .05) obtiveram correlações significativas com a culpa ética, não se encontrou um efeito de mediação significativo da regulação emocional (*p* > 0.05).

Palavras-chave: culpa; vinculação; regulação emocional; segunda infancia.

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I. LITERATURE REVIEW.

Morality, as a human phenomenon, has been, for millennia, a subject-matter of great and extensive philosophical thought, a fundamental conceptual pillar on which religions all over the world have based themselves on and, ultimately, one of the indispensable building blocks of modern lawful civilization. Inasmuch as it underpins the moral norms and rules that govern our actions and interactions with others (Wilke & Goagoses, 2023), as well as one's sense of moral self (Hoffman, 2000), understanding morality and the development of morality is important as an effort to improve societal and individual well-being (Wilke & Goagoses, 2023), specially at a time where mental health and well-being has been at a decline, with a significant increase in violence and aggression, anxiety, depression and other internalizing psychopathologies (Hossain et al., 2020).

Moreover, within the study of morality, and especially psychological research and interest in this area, there is a particularly interesting focus on the role of emotions in morality and moral behavior (Eisenberg, 2000). This focus is based on the understanding that moral emotions are a central, although often overlooked, aspect of human morality that play a significant role in individuals' (and groups') thoughts, feelings and behaviors (Tangney et al., 2011).

MORAL EMOTIONS.

Moral emotions such as guilt, shame or pride are a specific category of emotions, distinct from basic emotions, which are inherently related to the self (Robins & Schriber, 2009) as well as a fundamental element of human moral functioning (Santos et al., 2020), a linking element between moral norms, moral decisions and, consequently, moral behavior (Tangney et al., 2007).

Contrary to basic emotions such as sadness, joy or fear, whose primary function lays connected to survival (Izard, 2007), moral emotions play an important role in human relationships and social interactions as they motivate individuals towards respecting and adhering to social and individual (Goffman, 1967) moral norms and expectations (Tracy et al., 2007). In essence, moral emotions intervene in regulating an individual's feelings, thoughts, and behavior so as to behave in a moral and socially appropriate fashion in their interaction with others (Tangney & Tracy, 2012).

They emerge in moral contexts, prompted by assessments and appraisals that an individual makes of themselves and others (Nussbaum, 2001). According to the object of this prompted

assessment, moral emotions can be categorized as other-oriented or self-oriented. Other-oriented moral emotions, such as contempt and gratitude, as the term suggests, imply an appraisal of another individual and their actions (Tangney et al., 2007). On the other hand, self-oriented moral emotions, such as guilt and shame, emerge from an appraisal of one's own actions in regard to the consequences of said action on others (Tangney et al., 2007). The latter, as they require a reflection of the self and the self's actions, allow for immediate and salient feedback on one's behavior, acting as a "moral and emotional barometer" (Tangney et al., 2007, p. 2). Moreover, according to the moral stimulus, moral emotions can have a negative valence, when they cause pain and hurt to the self and/or others (Ongley & Malti, 2013) such as guilt and shame (Malti & Latzko, 2012), or, on the other hand, a positive valence when they emerge as a result of acting in accordance to moral norms (Ongley & Malti, 2013) such as pride and gratitude (Malti & Latzko, 2012).

Unlike basic emotions, moral emotions are considered to be significantly more complex, requiring a considerable ability for emotional and cognitive processing (Malti & Dys, 2015; Malti, 2016). Therefore, although there is empirical evidence on precursors and early manifestations of prototypical emotions of guilt, shame and pride in three year old children (Kochanska et al., 1994), moral emotions, as a whole, emerge during human development, more specifically during middle childhood and adolescence (Izard, 2007) as we acquire and fine tune the ability to create representations of self and others, along with theory of mind which allows us to recognize and identify others' expectations of us and our actions as well as acknowledge and understand moral norms and rules (Tracy & Robbins, 2004; Muris & Meesters, 2013; Malti & Dys, 2015). These cognitive and emotional skills allow children to gradually engage in social interactions and close relationships with others, in the best possible manner, for them and for others (Muris & Meesters, 2013).

However, similarly to basic emotions, it is important for moral emotions to be experienced in a regulated manner so as to not lose their adaptive value and, consequently, contribute to less-adaptive developmental trajectories (Muris & Meesters, 2013). Both high and low levels of moral emotionality have been linked to internalizing and externalizing behavior (Silva et al., 2022). As an example, Muris and Meesters (2013) observed that a predisposition to shame is linked to a prevalence of internalizing symptoms such as anxiety and depression while a lack of predisposition to feelings of guilt are related to externalizing symptoms such as aggression and violence, shedding light on the connection between moral emotions and moral behavior (Tangney et al., 2007).

THE MORAL EMOTION OF GUILT.

Developmental literature on moral emotions has focused, mainly, on two other-oriented and positive valence emotions - empathy and sympathy (Eisenberg et al., 2013). Meanwhile, research on self-oriented and, specifically, negative valence moral emotions such as guilt is still lacking (Malti & Dys, 2015).

However, through the centuries guilt has been of interest to a wide variety of subjects and domains including the psychological sciences (Malti, 2016). More specifically, current psychological knowledge on the emotion of guilt can be considered to have had its beginning with the groundbreaking psychoanalytic work of Helen Block Lewis (1971), who defines guilt as the negative appraisal of a specific behavior, which causes intrapsychic pain to the individual.

Nowadays, expanding on this initial conceptualization, as a self-oriented and self-critical negative moral emotion (Miceli & Castelfranchi, 2018), guilt is defined as the negative assessment of a morally transgressive behavior, objective, belief or characteristic for which an individual believes to be responsible (Tangney et al., 2007). As it causes agitation, fear, anxiety and/or tension (Ferguson et al., 1999), guilt is also considered a socially adaptive emotion which motivates an individual to reflect on their transgressive behavior and repair any damage caused by it (Hoffman, 2000).

Moreover, Hoffman (2000) conceptualizes guilt as being composed of two distinct components: a cognitive component and an emotional component. The cognitive component involves the acquired awareness of self and others, of how the actions of the self affect others, as well as an understanding of the (possible) differences between one's perspectives and representations and those of others (Hoffman, 2000). In turn, the affective component relates to the painful feelings and emotions experienced as a consequence of one's harmful actions on others (Hoffman, 2000). These actions can be diverse in nature as studies with adult samples have shown that feelings of guilt can be prompted by a wide range of moral norm transgressions, whether they be prescriptive or descriptive (Miceli & Castelfranchi, 2018), such as failing to complete important tasks or responsibilities, neglecting a loved one, or cheating (Keltner & Bushwell, 1996).

Similarly, through cross-sectional and (a few) longitudinal studies with children and adolescents, developmental researchers have tried to define and understand the emotion of guilt, how and when it emerges during human development and how it may influence developmental

trajectories (i.e., Kochanska et al., 2009; Malti & Dys, 2015). As a result, we understand that a predisposition to guilt has been related to an interconnected range of constructive, adaptive, and "positive" emotions, cognitions and behaviors (Tangney et al., 1996) which contribute to quality interpersonal relationships (Malti, 2016) and prosocial moral behavior (Olthof, 2012; Malti & Krettenaeur, 2013). So, as a predicting factor of prosocial moral behavior in children and adolescents (Olthof, 2012; Malti & Krettenaeur, 2013), feelings of guilt seem to reduce the likelihood of violence in general (Arsenio et al., 2006), whether it be direct or indirect aggression (Tangney et al., 1996), and criminal recidivism (Muris & Meesters, 2013), while also encouraging reparative behavior in children from, at least, 15 months on (Zahn-Waxler et al., 1992). Studies have also shown that children who frequently experience guilt as a result of their transgressions are more attentive and caring with others and have higher quality friendships and relationships in general (Estrada-Hollenbeck & Heatherton, 1995; Kochanska & Aksan, 2006).

However, albeit a universal emotion (Malti, 2016) there is a significant degree of individual variability to the emotional and cognitive experience of guilt, as a result of an assortment of biological, psychological and social factors (Malti & Dys, 2015). For example, as mentioned above, feeling guilty requires the development of complex cognitive processes which are only established during middle childhood, such as theory of mind (Arsenio et al., 2006; Malti & Dys, 2015). This implies that the development of guilt itself, as well as an understanding of guilt, only starts to "truly" be established around 8 years of age (Berti et al., 2000; Olthof et al., 2000) and stabilizes during adolescence (Malti, 2016).

Yet, Glasser et al. (2013) have observed that children who are exposed to social exclusion of peers and others due to disability start to attribute feelings of guilt to transgressors as soon as 6 years of age, suggesting a significant sociocultural and contextual influence on our experience of guilt, mainly in our cognitive understanding of emotions (Malti, 2016). This is not an outlandish suggestion. Guilt being a moral emotion, which relies upon the moral norms and expectations of an individual's context and environment, means that this sociocultural impact is a crucial key element in the broader and more complex understanding of guilt in the most diverse circumstances, possibly explaining not only differences and discrepancies between individuals but also communities, cultures (Robins & Schriber, 2009) and gender (Else-Quest et al., 2012).

UNDERSTANDING AND DIFFERENTIATING GUILT.

Furthermore, a comprehensive understanding of guilt also implies thorough knowledge of the specific intricacies and differences within the experience of guilt, with an underscored importance of identifying and distinguishing the different subtypes (Malti, 2016). Malti et al., (2017) have conceptualized ethical and non-ethical guilt as dimensions of a broader construct of healthy guilt. Ethical guilt seems to be rooted in the painful idea of negatively affecting others' welfare and having a strong regard for fairness and justice towards others, whereas non-ethical guilt, on the other hand, appears to stem from fearful expectations of punishment from authority figures, dominating one's self with anxiety over being caught and, subsequently punished over their actions (Malti et al., 2017).

From this perspective, ethical guilt is widely considered to be a more adaptive and prosocial response to wrongdoing than non-ethical guilt as it has been associated to more reparative and prosocial behavior and, therefore, central to one's healthy social development (Mehrotra et al., 2022). Nocentini et al., (2020) found that children who scored higher on ethical guilt were more likely to adopt defender behavior in a bullying situation, while children with lower ethical guilt scores were found, by Colasante et al., (2022), to be more likely to display externalizing behavior. Jambon and Smetana (2020), as well as Tani and Ponti (2018), found that children who reported being prone to ethical guilt were less likely to be rated as aggressive than their counterparts.

However, Tani and Ponti (2018) also found that, conversely, children with proneness to non-ethical guilt were associated with higher aggression scores. These results underscore the complexity of non-ethical guilt as they counter the belief that this form of guilt, even though it isn't motivated by moral and ethical factors or reasoning, might still contribute to prosocial behavior as it inhibits externalizing impulses (Jambon et al., 2022). The lack of empirical evidence surrounding this concept doesn't allow for a fuller understanding of these subtypes and their distinction which is fundamental in order to comprehend the experience of guilt and connected developmental trajectories.

(DYS)REGULATION OF GUILT.

Moreover, it is important to understand the circumstances under which the experience of ethical guilt accomplishes (or not) its moral objective (Muris & Meesters, 2013). Just as with any

other emotion, it must be regulated and appropriate to the triggering transgression and the context in which it occurs (Muris & Meesters, 2013).

We acknowledge that healthy and adaptive guilt has been established as a predictor of prosocial behavior and a number of other positive developmental outcomes (e.g., Tangney et al., 1996; Olthof, 2012; Malti & Krettenaeur, 2013). Yet, when there is a particularly heightened predisposition for guilt, even an ethical form, and it becomes a predominant emotion response which guides one's behavior, or conversely, there seems to be a particularly impaired (or non-existent predisposition, guilt as a moral emotion no longer serves its adaptive function (Muris & Meesters, 2013). Excessive and disproportionate levels of guilt, similar to feelings of shame (Muris & Meesters, 2014), in other words, neurotic guilt. are associated with maladaptive developmental pathways in both children and adolescents (i.e., Oakley et al., 2012). Subsequently, research has shown that a certain proneness to neurotic guilt in young children is connected to a prevalence of feelings of despair, worthlessness (Oakley et al., 2012), anxiety and depression (Zahn-Waxler & van Hulle, 2012). Moreover, this dysregulated facet of guilt might prompt and facilitate hazardous or personally costly prosocial behavior which, although beneficial for others, might bring about negative repercussions for the guilt-ridden individual (Malti, 2016).

On the other hand, an absence of guilt has been shown to be associated with maladaptive externalizing symptoms such as, for example, disruptive behavior, aggression, violence, and conduct issues which, in turn, negatively affect one's social and interpersonal relationships (Frick & Morris, 2004; Kochanska & Aksan, 2006).

MEASURING GUILT.

Acknowledging this considerable impact that guilt, whether it be regulated or dysregulated healthy moral guilt, ethical and non-ethical guilt or neurotic guilt, has on one's developmental pathways and mental health, the importance of understanding and considering these emotional concepts within the wider scope of intervention and clinical practice must be emphasized (Malti, 2016). To this end, assessment instruments and methods which are capable of accurately identifying and distinguishing not only these intricate nuances within the conceptualization of guilt itself but also between guilt and other similar moral emotions such as shame are of the utmost importance (Malti, 2016). Existing research has essentially examined and assessed moral emotions

by means of questionnaires and self-reported measures, whether that be with direct statements or hypothetical scenarios (Robins & Schriber, 2009).

Specifically, research on negative valence moral emotions such as guilt and shame has predominantly employed the "happy-victimizer" paradigm, whereby, children and adolescents are shown hypothetical scenarios of moral transgressions and are subsequently asked how they think that the "victimizer", whether it be themselves or others, would feel as a result of their transgression (Ongley et al., 2014). Some examples of assessment instruments following this rationale are the Test of Self-Conscious Affect (TOSCA, Tangney et al., 1989), which assesses predisposition for general guilt and shame in adults, adolescents (TOSCA-A, 1991) and children (TOSCA-C, 1990), and the Social-Emotional Responding Task (SERT, Malti et al., 2017) which assesses the predisposition for different dimensions of healthy moral guilt in children between the ages of 4 and 10 years old. However, these self-reported measures require the respondent to be fully aware of their emotions, to be capable of distinguishing similar or near identical emotions and, of course, to be willing to (consciously and unconsciously) share their true feelings and, therefore, are a considerable methodological limitation in moral emotion research (Robins & Schreiber, 2009).

Conceding to the inherent complexity of moral emotions and the methodological restraints and limitations mentioned, there has been a call for research that encompasses a systemic multi-method assessment (Malti, 2016), namely using naturalistic observation (such as facial expressions and non-verbal behavior observation) (Robins & Schriber, 2009), physiological responses (such as event-related potential (Malti, 2016) or significant presence of specific related neurotransmitters (Robins & Schriber, 2009)), and, ultimately, laboratory experiments akin to Ekman et al.'s (1983) Relived Emotion Task.

Lastly, notwithstanding current research, there is still an urgent need for a comprehensive understanding about the emergence and precursors of guilt, and its normative (and non-normative) development process as well as its implications on development pathways of children, adolescents, and adults (Malti, 2016). For example, research on socioemotional development in general, and moral emotions in particular, has suggested the existence of a considerable impact of caregiver-related dimensions, such as attachment security on the development of guilt (e.g., Lopez et al., 1997; Mikulincer & Shaver, 2005; Muris et al., 2014).

ATTACHMENT THEORY.

Growing up, one of the most impactful circumstances for a child's development is their family, whether it be biological or otherwise (Kerns et al., 2001). More precisely, within this context, it is the nature and quality of the relationship between the child and those who care for them which is of immense influence on the child's development (Kerns et al., 2001).

This affective relationship, stemming from the history of interaction between the child and their caregiver, whether it be a mother, a father or another figure that cares for the child, has been termed the attachment relationship (Bowlby, 1982) and is considered to be a central aspect of human functioning throughout life (Bowlby, 1988), present in virtually every human being alive.

With knowledge from various different fields, such as ethology, cybernetics, developmental psychology and psychoanalysis, but distinct from the existing psychodynamic perspective, John Bowlby conceptualized attachment as a fundamental system of behavior control within the central nervous system, whose main function is to maintain an infant in close distance and easy accessibility to their caregivers (1988) in what is termed as "environmental homeostasis" (Bowlby, 1982, p. 295). This is achieved, initially, through a repertoire of behaviors intended to maintain children in physical proximity to their significant caregiver (Ainsworth, 1985). Obvious attachment-related early-age behavior can be classified into two groups: 1) signalling behavior that brings the caregiver to the child, such as crying, smiling, and calling; and 2) approach behavior that brings the child to their caregiver, such as crawling and walking (Bowlby, 1982).

However, these behavioral manifestations are just one element of the day-to-day experience of the interactions between the child and their caregiver (Ainsworth, 1989) which, ultimately, establish the attachment system (Bowlby, 1982; Waters & Cummings, 2000). The attachment relationship as conceptualized by Bowlby (1982) and Ainsworth (1985) can be formed only as the infant acquires certain cognitive competences such as, for example, the ability to understand that their caregiver exists even when they are absent from their sight (Ainsworth, 1982) or that they possess their own thoughts and desires, distinct from the child's (Bowlby, 1982).

In that sense, according to Bowlby (1982) attachment emerges in a series of phases that build upon each other, dependent on the child's cognitive and motor abilities during each phase. Firstly, from birth to around 6 weeks of age, during the phase of "indiscriminate responsiveness", the child is able to direct their behavior towards others, through the means of tracking movement

with their eyes, smiling, babbling and attempts at grasping and reaching, but does so in an indiscriminate manner (Bowlby, 1982). Then, up to 6 to 8 months of age, as attachment begins to develop, the child is in the "preferential responsiveness" phase. During this phase, the child continues to direct their behavior to others but clearly does so more for their primary caregiver than others, implying the beginning of discrimination of attachment figures (Bowlby, 1982).

During the third phase, which starts at around 6 to 8 months of age, there is the emergence of secure-base behavior. In other words, the child starts to manifest approach behavior, crawling and walking, to maintain proximity to their established attachment figure and, more importantly, starts to use this figure as a secure base from which they explore the world around them (Bowlby, 1982). Here, the infant starts to become anxious and explicitly exhibits signs of distress when separated from their attachment figure (Bowlby, 1982).

As the infant starts to acquire more complex and sophisticated cognitive structures such as object permanence and cognitive perspective-taking (Marvin & Greenberg, 1982), from 18 to 24 months of age onward, they start to form their first representational model of their primary caregiver and enter what Bowlby (1982) termed the "goal-corrected partnership" (p. 219). During this time, through repeated daily experiences with their caregiver, the infant starts to understand patterns and create expectations from their attachment figures' behavior (Ainsworth, 1985) which, as they are organized internally, establish the individual's "internal world" (Bowlby, 1982, p.283).

INTERNAL WORKING MODELS.

Bowlby (1982) states that the pattern of day-to-day dyadic interaction between the child their attachment figure(s) and the resulting behavioral expectations are internalized by the child and establish what is termed as internal working models - cognitive and affective representations (Coleman, 2003) of the self, of others and, ultimately, of the physical world in general (Bowlby, 1982).

When a young baby and their caregiver are interacting, facing each other, what we observe is an interaction of alternate and complementary cycles of engagement and disengagement (Bowlby, 1988). The baby's spontaneous interaction happens at their rhythm while their caregiver should be able to regulate their behavior in a responsive interplay with them, adapting to their sounds, movements and timings (Bowlby, 1988) - the typical behavior of an attuned, sensitive, responsive and communicative caregiver (Bowlby, 1988; Ainsworth, 1989). However, regardless

of the quality of the interaction between the dyad, the dyad's pattern of interaction is then internalized by the infant, who will start to create expectations of how others and the social world around them work, as well as their ability to interact with it, establishing their internal working models (Bowlby, 1982).

Therefore, with how the child's attachment figures communicate and behave towards them (Bowlby, 1988) these dynamic internal working models, operating at an unconscious level (Bowlby, 1988), create a framework through which the child perceives and evaluates the world, acting accordingly, influencing their cognition, emotions and behavior (Bowlby, 1982) and informing a general approach to the physical world as well as the interpersonal relational world (Bretherton, 2006).

PATTERNS OF ATTACHMENT.

The seminal Strange Situation Procedure by Ainsworth et al. (1978) allowed us an early glimpse into the way that internal working models affect a child's behavior. By analysing the nature of the dyadic interaction between 12-month-old infants and their mothers, the availability and the sensitivity with which the mother responded to their child's signals, they identified three distinct patterns, initially labelled Pattern A, Pattern B and Pattern C (Ainsworth et al., 1978).

Firstly, the Pattern B babies, who were considered to have a secure attachment, were children whose mothers were able to consistently and lovingly respond to their child's signals and needs promptly and appropriately, across different contexts (Ainsworth, 1985). Consequently, these children establish an internal working model of confidence and trust in their mother as available and responsive, in themselves as competent, reliable and valued and, ultimately, of the world as a safe and benign place (Bowlby, 1973), therefore feeling free and safe to explore it (Bowlby, 1988).

Then, there are the Pattern A and the Pattern C babies, considered to have an insecure attachment (Ainsworth et al., 1978). Pattern A babies, considered to have an anxious-avoidant attachment, and whose mothers were less responsive and also appeared to be, in general, more rejecting of their child (Ainsworth, 1988), established an internal working model of their attachment figure as unavailable (Ainsworth, 1985) and rejecting, of themselves as unworthy and not valued and of the world as an unreliable place (Bowlby, 1973). On the other hand, the Pattern C babies, considered to have an anxious-ambivalent attachment, were a result of inconsistent

availability and responsiveness on their mothers' behalf (Ainsworth, 1985), which established an internal working model of permanent uncertainty towards the attachment figure's availability, of themselves as incompetent and unworthy and of the world around them as unpredictable and unsafe (Bowlby, 1973).

These contrasting behaviors are explained by the internal working models that the children in the Strange Situation Procedure had been developing around their everyday interaction with their mothers, informing their expectation of her behavior during the situation, and, ultimately, influencing their behavior towards her and what pattern of behavior might emerge (Ainsworth, 1985). Just as these internal working models influence how the babies process and react to their mothers' behavior, they eventually also play an extremely important role in an individual's developmental process, as mentioned above, influencing their thoughts, emotions and behavior in interpersonal relationships throughout an individual's life (Waters & Cummings, 1989). So, the nature and the quality of this interaction is fundamental to explain individual differences in the attachment patterns underlying the manifested behaviors and, consequently, individuals' differences in personality (Bowlby, 1973). For example, a securely attached child, who has a responsive and sensitive caregiver will experience distressing emotions and feelings as being helpful in alerting and recruiting their caregiver to them who, acting as secure base and a safe haven for them will, in turn, help them in dealing with the situation and the emotions evoked, establishing an internal working model in which such emotions are experienced as less threatening and likely more beneficial (Cassidy & Kobak, 1988).

CONCEPTUALIZING SECURE BASE AND SAFE HAVEN.

Ainsworth (1989) also referred to attachment as an "affectionate bond", an exceptional long-enduring bond with an un-interchangeable and unique other, from whom separation causes distress and, in case of permanent loss or death, grief. However, she highlights the attachment bond as unique as, contrary to other affectionate bonds, attachment implies the search for closeness which, if achieved, should mean security and comfort as well as an ability to use the partner as a secure base from which to engage in the world (Ainsworth, 1989). The sequence in the Strange Situation Procedure is an illustrative example of the behavior manifestations that characterize these central concepts of a secure base and a safe haven (Bowlby, 1988).

Bowlby (1988) conceptualized secure base as the ability of the mother, father or caregiver to show the child that they can trust them to be available and readily responsive to them when in danger or otherwise in need, intervening if needed. If successful in establishing this the child can "depart" from their secure base to explore others and the world around them with ease and confidence not only in their caregiver but also in themselves (Ainsworth, 1985). At first, as they explore, if the child becomes scared or tired, they can return to their attachment figure, their safe haven, who they know will be physically available and responsive to comfort them (Ainsworth, 1985). With time and experience, this child is able to distance themselves physically from their secure base for increasingly long periods of time without distress, comforted by the knowledge that their safe haven will always be there for them (Ainsworth, 1985).

ATTACHMENT BEYOND INFANCY.

Notwithstanding the precocious developmental chapter during which one's attachment relationship with their primary caregiver(s) is established (Bowlby, 1982), due to its primacy (Sroufe, 2005) attachment continues to play a fundamentally critical role during childhood, adolescence and adulthood as humans need to know that they can count on their attachment figures to be available to them needed, both as a secure base and a safe haven (Bowlby, 1989). However, as stated by Bowlby (1982) even though attachment endures all throughout our lifespan, it ultimately presents differently according to one's developmental period, cognitive and emotional competences, and yet all the demands and obligations of the social world.

More specifically, middle childhood, from ages 6 to 12 years old, is an interesting and fundamental albeit underappreciated period in human development (Del Giudice, 2009). Despite appearing, at first glance, as a somewhat slow and uneventful transition between the exciting and eye-catching phases of early childhood and adolescence (Del Giudice, 2009), middle childhood is, in fact, an electrifying period in an individual's development journey in which children experience significant and transformational progresses in their "internal world", as a result of important advances in cognition, memory and cognitive flexibility, a general greater understanding of the self and others (Raikes & Thompson, 2005), acquisition of cultural norms (Del Giudice, 2009) and complex moral reasoning (Weisner, 1996), as well as in their "external world" as they experience an expansion of the social world around them, spending more time away from their caregivers and

closer to others, such as their peers who increasingly acquire more importance in their lives becoming preferred playmates (Seibert & Kerns, 2009).

This degree of cognitive and emotional development allows for children in middle childhood to play a more active role in their daily routine, participating in the co-regulation of their relationship with their attachment figure (Brumariu et al., 2018) which, in turn, facilitates a concomitant increased capacity for their own self-regulation, albeit still supervised and ensured by their caregivers (Kerns et al., 2001). Simultaneously, there is less emphasis on physical proximity and more emphasis on the caregiver's competence as a secure base and a safe haven, by establishing a cooperative, sensitive and open interaction, encouraging their child's independence and exploration with supervision partnership, and being a sounding board on which to test the child's emerging beliefs about others and self (Waters & Cummings, 2000). Thus, despite possible physical distance, attachment figures continue to be available while attuning to their child's emotional and psychological needs (Kerns et al., 2001), as "one's most trusted companions" (Ainsworth, 1978, p. 20).

However, notwithstanding the myriad of interesting and complex transformations that occur during middle childhood and, more importantly, regarding attachment relationships during middle childhood, there is still much about this phenomenon to explore and understand (Parrigon et al., 2015).

ATTACHMENT AND DEVELOPMENTAL PATHWAYS.

Nearly 20 years after John Bowlby's first publication on attachment, he stated that "the infant and young child should experience a warm, intimate and continuous relationship with his mother (or permanent mother substitute) in which both find satisfaction and enjoyment so as to develop and grow mentally healthy, with all the benefits attached" (1985, p. 13). Echoing this sentiment, even while acknowledging a hierarchical and organizational perspective on human development in which each phase of development builds upon earlier phases, invariably subject to change, attachment is considered a core frame around which all other experience is organized and structured (Sroufe, 2005), influencing development all throughout one's lifespan (Waters & Cummings, 2000).

Currently, there is ample empirical evidence of the intrinsic impact attachment plays upon an individual's developmental pathways, showing that differences in attachment (in)security are

related to significant differences in a multitude of developmental aspects such as self-concept (e.g. Doyle et al., 2000), self-esteem (e.g. Sroufe, 2005), peer social competence (e.g. Raikes et al., 2013; Fernandes et al., 2019), emotion understanding (e.g. Murphy & Laible, 2013; Waters & Thompson, 2014) and emotion regulation (e.g. Sroufe, 2005; Fernandes et al., 2021a), social problem solving (e.g. Raikes et al., 2013) and conscience development (e.g. Kochanska, 2010).

Notably, Bowlby (1988) first conceptualized that individuals whose caregivers were responsive and sensitive, or in other words, children who were securely attached, would be more likely to follow healthy and adaptive developmental pathways. Studies have since shown a secure attachment as a significant predictor of peer acceptance and global social competence (Fernandes et al., 2019), as secure children are seen as more socially engaged and active in their peer group, less frequently isolated and more likely to have deeper mutual relationships (Sroufe, 2005) and, therefore, more likely to create and maintain an extensive and more supportive social network than their insecure counterparts (Anan & Barnett, 1999). Moreover, cognitively, attachment security seems to be positively associated to a higher sense of self-worth (Booth-LaForce et al., 2006), and emotion understanding (Laible & Thompson, 1998;) as well as empathic concern (Murphy & Laible, 2013), showing that securely attached children tend to be more empathetic (Sroufe, 2005). As a matter of fact, a meta-analysis by Cooke et al., (2019) has shown that securely attached children seem to experience more global positive affect and are more able to regulate their emotions, using cognitive and social adaptive coping strategies, hereby making it so they are less likely to confront any social conflicts with frustration, aggression or simple withdrawal (Sroufe, 2005). Then, behaviorally, attachment security has been consistently negatively associated with parent and teacher ratings of externalizing-aggressive behaviors such as aggression and internalizing-withdrawal behaviors such as depression and social withdrawal (Fernandes et al., 2019).

On the other hand, children whose caregivers were unresponsive, insensitive, neglecting or rejecting would be more susceptible to divergent and non-adaptive developmental pathways, becoming more vulnerable to mental illness and, ultimately, breakdown when confronted with severe adversity (Bowlby, 1988). Children with insecure attachment, as a whole, have been shown to experience less global positive affect, more global negative affect (Cooke et al., 2019), an overall difficulty in regulating their emotions (Sroufe, 2005) and an inconsistent but reduced ability to employ adaptive and effective coping strategies (Cooke et al., 2019). Behaviorally, insecurity in

attachment has been linked to both internalizing and externalizing symptoms during childhood and adolescence (e.g. Bosquet & Egeland, 2006), although empirical evidence is still mixed on how the different patterns of attachment insecurity are associated to each of the two different behavioral categories, on whether there is a specific pattern of insecurity more typically linked to a specific category of behavior or otherwise (Brumariu & Kerns, 2010).

However, notwithstanding the immense importance of one's attachment relationship for their developmental pathway and, ultimately their well-being (Perpétuo et al., 2023), it is neither a deterministic factor of vulnerability or invulnerability to psychopathology (Bowlby, 1982) as human beings are a complex and dynamic interplay between the self and the world around them, and therefore developmental transformation is always possible, for better or for worse (Bowlby, 1988)

EMOTIONAL REGULATION.

Historically, emotion regulation has been valued as an essential and characteristic trait associated with morality, rationality and discipline (Thompson et al., 2013). During the last few decades, it has become a research theme of considerable interest in developmental science (Calkins & Howse, 2013), largely due to the significant and central role that regulation as a whole play in human development (Eisenberg, 2000). However, understanding regulation of emotion has proven itself to be a major challenge in child development research (Simonds et al., 2007), as a result of the divergent and distinct conceptualizations that have arisen (Gross, 2014), the continuous changes it undergoes during the developmental process and the myriad of different regulation-related variables which have been focused on (Eisenberg et al., 2013), amongst other circumstances.

An elemental and comprehensive definition of emotion regulation derives from Ross Thompson's (1994) work, where he defines it as the "intrinsic and extrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to achieve one's goals" (p. 27). Encapsulated in this definition is the assumption that emotion regulation, aside from being a multiple component process which includes monitoring, evaluating and responding to emotional stimuli, it emerges from a combination of one's self-regulatory efforts and of other's regulatory influences (Thompson, 2011). Moreover, it is considered to have a far-reaching influence as it affects both positive and negative emotions and implies the ability to enhance, blunt, maintain or inhibit emotional arousal, or even to deflect to an

alternative emotion (Thompson, 2011). Building upon this definition, Eisenberg et al. (2013) have increasingly broadened this construct to characterize it as "the process of initiating, avoiding, inhibiting, maintaining, or modulating the occurrence, form, intensity, or duration of internal feeling states, emotion-related physiological processes, emotion-related goals, and the behavioral concomitants of emotion, generally in the service of accomplishing one's goals" (p. 278). This last-mentioned functionalist feature has been emphasized in essentially every modern conceptualizing of emotion regulation, highlighting its crucial role in achieving one's individual goals as well as to foster effective engagement and adjustment in social and environmental circumstances (Cicchetti et al., 1991; Köpp & Neufeld, 2003; Sabatier et al., 2017) and ultimately, underlining the importance of understanding emotion regulation taking into account specific and individuals goals the context in which the emotions arise (Thompson, 2011).

DEVELOPMENT OF EMOTION REGULATION.

However, emotion regulation is not an innate and immediate human competence. Starting at birth, human beings acquire the ability to regulate their emotions in a continuous and increasingly efficient manner (Köpp & Neufeld, 2003), becoming incrementally sophisticated during preschool and primary school years (Fox, 1994) as a result of the development and complexification of cognitive and emotional processes (Shields & Cicchetti, 1997).

During the first three years of life, from primitive physiological arousal control mechanisms such as heart rate increase or decrease in response to stimuli, basic attentional processes such as engagement or disengagement from stimuli and other regulatory competences such as self-soothing, a child establishes the groundwork necessary for the complete development of their regulatory control systems (Calkins & Howse, 2013), which will continue to mature during the remainder of their childhood, adolescence and young adulthood (Zimmerman & Iwanski, 2014). However, initially, an infant's emotion regulation is essentially external as it depends on others' own regulatory mechanisms, such as those of parents, caregivers and other relevant adults, to modulate the emotional responses that the child experiences and expresses (Thompson, 1994, 2011).

Therefore, as a child becomes fully mobile and as a result acquires more independence, they start to be able to control their behavior to a certain extent, although they still require some supervision and guidance from those around them (Kochanska et al., 2001). From there on, they

also start to recognize their own basic emotions and the basic emotional states of others, responding to them accordingly (Pons et al., 2004; Thompson, 2011), and begin to differentiate between internal experiences such as desires and expectations, and external experiences such as memories (Pons et al., 2004). They also seem to start to understand that different people might have different thoughts, emotions and reactions when placed in the exact same situation (Pons et al., 2004). This understanding improves as, during middle childhood, at around the seven year mark, children experience a significant transformation in their cognitive development, allowing them to rely less on behavioral regulatory skills and to start employing more cognition-based regulatory strategies selectively (Calkins & Howse, 2013), which they can now, to a certain extent, use to manage their emotions and their emotional expression even masking their true feelings and emotions when they perceive them as inconvenient or inappropriate (Pons et al., 2004). These regulatory skills become more and more sophisticated (Fox, 1994), as one's biological, cognitive and socioemotional developmental process continues and they encounter increasingly bigger demands from not only their family and peers but from society as a whole (Kim-Spoon et al., 2013). Reciprocally, these early-developing emotion regulation processes contribute to the development of a multitude of more complex metacognitions, interpersonal and behavioral control processes (Cole et al., 1994).

REGULATED AND DYSREGULATED EMOTION.

Thus, emotion regulation is fundamental to a myriad of psychological and behavioral functions (Waters et al., 2010), possessing the potential to either undermine or constructively contribute to behavioral organization and adaptive functioning (Thompson, 2011). More specifically, it is essential in initiating and organizing optimal adaptive behavior and, simultaneously, reducing or even preventing maladaptive behavior (Cicchetti et al., 1995).

Optimum emotion regulation can be defined as the ability to manage one's emotion in a manner which supports a number of indices of general adaptive and constructive functioning such as personal adjustment, interpersonal relatedness, social competence and prosocial behavior, sympathy and empathy towards others, cognitive development, among others (Thompson, 1994; 2011). This line of thought also suggests that a lack of optimum emotion regulation, or in other words emotion dysregulation, implies an absence of these essential competences (Thompson, 1994). However, Thompson (1994) considered that the definition of optimum regulation can vary depending on the individual, their specific goals in that moment and the situation they find

themselves in, making the case for the belief that emotion regulatory processes might not be inherently good or bad, adaptive or maladaptive but circumstantial, relying on one's emotional objectives in a particular circumstance.

Nonetheless, studies demonstrate that differences in emotion regulation competence is associated with significant differences in socioemotional development and functioning (Eisenberg et al., 2014). Successfully regulated individuals respond to a variety of emotional experiences with a range of socially acceptable and sufficiently flexible strategies and methods which are neither over controlling or under controlling (Eisenberg et al., 2013), which aim to reduce the painful and negative experience of emotions while enhancing the positive experience of emotions and ultimately, achieving a satisfying degree of mental and physical well-being (Aldao et al., 2010). Thus, when faced with difficulties, frustration and stress, are able to carefully balance between regulating their behavior without unnecessary restriction or constraint (Eisenberg et al., 2014) and are therefore more inclined to be well-adjusted and resilient with satisfactory levels of psychological well-being, academic achievement, healthy moral development (Kochanska & Aksan, 2006), higher levels of sympathy (Eisenberg et al., 2007) and empathy for others, and overall fulfilment in interpersonal relationships (Cassidy, 1994).

Then, an inability or difficulty in managing one's emotions in an appropriate manner has been associated to the emergence of a variety of internalizing and externalizing symptoms and behaviors such as anxiety, depression, suicidal ideation, aggression and delinquency, among others (Kim & Cicchetti, 2010; Sabatier et al., 2017). However, the specific manifestation of emotion dysregulation also varies according to individual differences, depending on whether the dysregulation is of an overcontrolled or undercontrolled nature (Eisenberg et al., 2014). Overcontrolled individuals exhibit high levels of behavioral inhibition and low levels of impulsivity and attention regulation, and are more inclined to experience internalizing symptoms such as depression, anxiety and social withdrawal (Eisenberg et al., 2014). As a result, they have a difficulty in relaxing, being socially spontaneous and interactive, and in general low social competence (Eisenberg et al., 2014). Although sharing this low level of social competence, undercontrolled individuals are quite the opposite to their overcontrolled counterparts as being highly inclined to impulsivity and exhibiting low levels of attention and behavioral control, resulting in deficits in prosocial behavior, moral development and levels of empathy alongside

being particularly prone to externalizing symptoms such as aggression, delinquency and antisocial behavior (Eisenberg et al., 2014).

EMOTION REGULATION AND ATTACHMENT.

The extensive repercussions of emotion (dys)regulation on human beings' psychological and physical health, which have been broadly theoretically hypothesized and empirically proven, demonstrate the utter importance of understanding and assessing these regulatory processes, especially the factors which influence its development. The numerous competences required for emotion regulation, and therefore emotion regulation as whole, are affected by a variety of elements of human development. A noteworthy aspect is one's significant social relationships - the context(s) in which an individual acquires and refines their capacity to manage and modify one's emotional states - be it in the context of the parent-child relationship, the relationships established with a broader family unit, with peers or with others (Thompson, 1994).

The parent-child relationship, or in other words the attachment relationship, is particularly paramount to early development of emotion regulation as one of its primary functions is to assist in regulating children's emotions, especially when these emotions are potentially disturbing or overwhelming (Bowlby, 1982; Cassidy, 1994; Thompson, 1994). As mentioned above, early on, parents and caregivers have the important task of externally regulating their baby's emotional experience (Thompson, 2011) not only through directly intervening in moments of distress, fear or other painful circumstances (e.g. Lamb & Nalkin, 1986) but also through modelling and selective reinforcement of positive emotion expression (e.g. Malatesta, 1990), explicit instructions on emotion regulation and cultural norms (Dunn & Brown, 1991) and controlling the contexts for opportunities for emotion arousal (e.g. Thompson, 1994). Thus, as children use their parents and caregivers as interpersonal resources to manage emotions, their socioemotional development and capacity for emotion regulation, these aspects are immensely susceptible to the parent's accessibility and sensitivity (Calkins, 1994; Cassidy, 1994; Thompson, 1994; Calkins & Howse, 2013). The degree to which a parent or caregiver is accessible and sensitive to their child's needs contributes significantly to the development of emotion regulation (Malatesta, 1990), possibly enhancing or undermining it and, as Malatesta (1990) goes so far to suggest, contributes to emotional biases in children.

This, to a certain extent, echoes Bowlby's (1973) conceptualization of the internal working models that emerge from the dyadic interaction between a child and their attachment figure(s) during the early years and which contribute considerably to social information processing. More specifically, they influence how individuals acquire, organize, and react to social information such as emotions and emotional states (Bowlby, 1980), creating a cognitive template for how one thinks, behaves and more importantly feels their emotions (Bowlby, 1982). Hence, attachment (in)security is of immense consequence to emotion regulation - the "dyadic regulation of emotions" (Sroufe, 1996, p. 172) - and, therefore, individual differences in attachment security are associated to differences in regulatory styles and strategies (Cassidy, 1994; Waters et al., 2010). For example, a securely attached child's emotional reactions and selection of coping strategies in certain distressful or painful situations (Kim-Spoon et al., 2013) are suggested to be heavily determined by their ability to access their attachment figure(s) as external sources of emotion regulation (Bowlby, 1982)

Research has since shown that securely attached children have parents who are more understanding, sensitive and responsive to their emotions, whether positive or negative, and are more likely to communicate openly and elaborately about them however intense, enduring and confusing they might be (Thompson , 2014). This consistent warm support in the face of emotional challenges reinforces emotion understanding, awareness (Brumariu et al., 2012) and general emotional competence in these secure children as well as allowing for the development of flexible, assertive and effective emotional regulatory strategies (Thompson, 2014; Mikulincer & Shaver, 2019; Sabatier et al., 2017). Due to their attachment figure's support and encouragement these children establish an enduring expectation that distress is manageable and they themselves are capable of withstanding and managing it (Thompson, 2014), which for example allows them to handle difficult and frustrating tasks with problem-solving and distraction strategies instead of distress (Calkins & Johnson, 1998). Consequently, secure children are more confident in their ability to handle threats and challenges, which in turn enables them to make less catastrophic assessments of challenging situations and just in general be more optimistic about themselves and the world around them (Mikulincer & Shaver, 2019). This optimistic and self-competent outlook perseveres throughout their lifespan, even as their attachment figure is no longer physically present (Thompson, 2014), as established by Sroufe (2005) in which secure children who were described by their teachers as more able to flexibly adjust their expression of emotions, to bounce back after

a stressful situation and less likely to collapse under stress or to manage social conflicts with frustration, aggression or simple withdrawal. They were also, in keeping with Bowlby's (1982) conjecture, more curious and interested in exploration, and less inhibited and constricted in their actions and emotions than their insecure counterparts (Sroufe, 2005).

On the other hand, insecure attachment, whether it be avoidant or ambivalent, is more likely to be associated with an experience of unstable and inappropriate regulation of distress (Bowlby, 1973). Because their attachment figure(s) are generally less sensitive, responsive and comfortable to communicate about difficult emotional experiences (Thompson et al., 2014), insecurely attached children do not seem to benefit from the same adaptive socioemotional development that secure children do, demonstrating difficulties in identifying, understanding (Brumariu et al., 2012) and managing emotions, whether theirs or those of others (Mikulincer & Shaver, 2007; Thompson et al., 2014).

More specifically, individuals with an avoidant attachment are prone to inhibiting or suppressing emotions and emotional states (Bowlby, 1980; Brenning et al., 2012) or simply emotionally disengaging, especially when related to painful and stressful emotions such as anger, sadness or guilt, resorting to emotion suppression strategies, suppressing, denying or diverting attention from emotion-related thoughts, memories, stimuli or behavioral tendencies (Mikulincer & Shaver, 2007). Then, individuals with an ambivalent attachment can be, to a certain extent, considered as having an opposite modus operandi to those of avoidant attachment as they tend to focus on negative and painful emotions, exaggerating, with a propensity to anxiously ruminate about stressful situations, spotlighting distress-related stimuli and amplifying and distorting the threat perception and assessment (Mikulincer & Shaver, 2007; Silva et al., 2012). This deep-seated dysregulated way of being (Brenning et al., 2012), in which even reasonably benign situations and events are perceptually heightened and experienced as dangerous (Mikulincer & Shaver, 2007), added to the fact that due to their attachment history these individuals develop a strong sense of unworthiness and incompetence (Bowlby, 1973), makes them very pessimistic about their ability to manage these situations and the emotions that arise from them (Mikulincer & Shaver, 2007).

ATTACHMENT, EMOTION REGULATION AND GUILT.

The quality of the dyadic relationship between children and their caregiver is crucial for children's development, having lasting impact all throughout their lifetime (Bowlby, 1982).

Research has thoroughly shown that secure individuals are likely to be more competent than their insecure counterparts in a myriad of socioemotional aspects such as social competence (e.g., Fernandes et al., 2019), self-esteem (e.g., Sroufe, 2005; Pinquart, 2023), sleep quality (e.g., Perpétuo et al., 2023), empathy (Panfile & Laible, 2012), emotion regulation (e.g., Cooke et al., 2019; Fernandes et al., 2021a), emotion expressiveness (Roque et al., 2013) and guilt proneness (e.g., Murphy et al., 2015), among others.

Of particular interest to this study, studies that have sought to explore the association between attachment security and guilt have shown, predominantly with adult or adolescent samples, that there is a positive correlation between attachment security and proneness to adaptive guilt (e.g., Lopez et al., 1997; Mikulincer & Shaver, 2005; Martins et al., 2021) which we equate to our conceptualization of healthy guilt (Malti, 2016). Furthermore, as attachment security correlates to healthy guilt, findings have also suggested that attachment insecurity is associated with higher levels of maladaptive guilt (e.g., Muris et al., 2014) or lower levels of adaptive guilt than their secure counterparts (e.g., Lopez et al., 1997), depending on the category of insecurity. In other words, ambivalent individuals seem more likely to experience more predisposition to maladaptive forms of guilt (e.g., Mikulincer & Shaver, 2005) while avoidant individuals, possibly due to their inclination to minimize emotional involvement (Cassidy, 1994), seem to experience lesser levels of guilt, even that which is considered healthy guilt (e.g., Mikulincer & Shaver, 2005; Akbag & Çinar, 2010).

However, other studies which have not focused specifically on the attachment relationship have focused on similar or interrelated variables such as parenting practices (e.g., dos Santos et al., 2020), styles (e.g., Parisette-Sparks et al., 2017) and rearing behaviors (e.g., Meesters et al., 2017). They have found that there is an association between these parental behavior variables and guilt-proneness, suggesting that parental practices based on reason and open communication (Muris et al., 2014; dos Santos et al., 2020), responsiveness and emotional warmth (Meesters et al., 2017) are positively associated with levels of healthy guilt in these children.

From this reduced cluster of studies on parenting and attachment, even fewer chose to study the role that emotion regulation might play in this relationship between attachment security and proneness to adaptive or healthy guilt (e.g., Murphy et al., 2015). Those have shown that attachment security is associated with higher levels of adaptive guilt, mediated by emotion

regulation (Murphy et al., 2015). However, this relationship was only partly mediated by emotion regulation, corroborating the idea that attachment has a direct positive association to healthy guilt (Murphy et al., 2015). Szentágotai-Tâtar and Miu (2016) also found that emotion regulation explained only approximately 20% of the variance of guilt proneness, in their sample of adolescents.

Regardless, research on this relationship between attachment (or parental factors) and proneness to healthy, adaptive guilt is scarce, especially with children in middle childhood, the developmental phase in which it emerges fully (e.g., Olthof et al., 2000). Therefore, given the importance of guilt for the progress of normative or deviant developmental pathways (e.g., Kochanska et al., 2009), it is imperative to further understand how variables such as attachment and emotion regulation, contribute to this development. Thus, the present study seeks to understand how attachment relates to the specific moral emotion of healthy guilt, as conceptualized by Malti (2016), and the anticipated mediating role that emotion regulation plays in this relationship.

II. METHODS.

STUDY OBJECTIVES AND HYPOTHESIS.

To tackle the scarcity of this subject matter in developmental research we seek to understand these variables in middle childhood which, as mentioned prior, is an essential period for the development of moral emotions (Berti et al., 2000; Olthof et al., 2000). To our knowledge, there have been no empirical, peer-reviewed studies which have researched the relationship(s) between these three variables, as conceptualized above.

As such, our two main objectives are to ascertain how attachment security relates to the moral emotion of healthy guilt, as conceptualized by Malti (2016) and whether emotional regulation has a mediating effect on this anticipated relationship in 8- to 10-year-old primary school children. So as to achieve these objectives, we specifically sought out to describe 1) these children's predisposition to healthy guilt, considering sex and age; 2) their attachment security to their mother and father, considering sex and age; and 3) their parents' perceptions of their capacity for emotional regulation, considering sex and age.

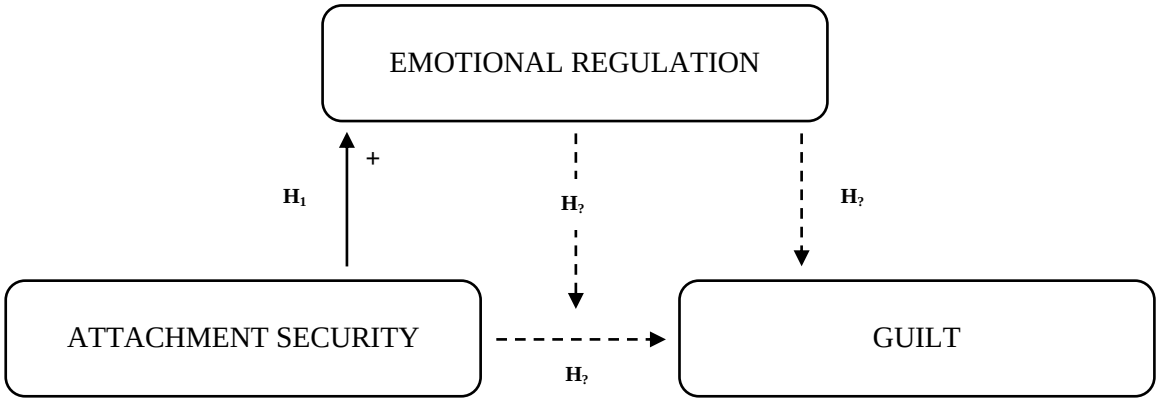
Thereafter, our specific objectives are to, within our sample of 8- to 10-year-olds, 4) examine the relationship between their attachment security and their capacity for emotional

regulation perceived by the parents; 5) study the relationship between their capacity for emotional regulation perceived by the parents and their proneness to healthy guilt, and; 6) study the relationship between the child's attachment security to their mother and father and their proneness to healthy guilt. Finally, we aim to 7) ascertain the existence of a mediating effect of the children's capacity for emotional regulation perceived by their parents on the relationship between their attachment security to their mother and father, and their proneness to healthy guilt.

According to existing literature, we expect there to be H1) a positive and significant correlation between attachment security to the mother and the father, and the capacity for emotional regulation perceived by both parents. However, considering the previously mentioned gaps in existing psychological literature, this study assumes a more exploratory nature in which we are not able to establish substantiated research hypotheses regarding the correlations between proneness to healthy guilt and our remaining research variables. Notwithstanding, research contemplating varying conceptualizations of guilt (e.g., Eisenberg, 2000) and attachment security (e.g., Lopez et al., 1997; Mikulincer & Shaver, 2005) or parenting-related measures (e.g., Muris et al., 2014; dos Santos et al., 2020) enable us to conjecture about positive and significant correlations between our corresponding variables. Furthermore, Murphy et al.,'s (2015) results inform our expectations that there will be a, at least partial, mediating effect of the capacity for emotional regulation on the association between attachment security and guilt.

Figure 1.

Main research hypothesis and conjectures.



PARTICIPANTS.

The present study recruited a convenience sample of 3rd and 4th grade children from 13 primary schools in the Greater Lisbon Metropolitan Area. The initial sample included 284 children aged 8 to 11 years old (47.5% third graders; 53.5% girls; M_{age} = 9.18 years old, *SD* = .728), their caregivers (*n* = 278, 54.3% mothers, 43.5% fathers, 1.1% grandmothers, 0.7% grandfathers, 0.4% sisters) and their grade school teacher (*n* = 27, 92.59% women).

However, this sample was reduced to only the children who fully met the necessary inclusion criteria of 1) being between 8 and 10 years of age; 2) being competently able to comprehend, read and speak Portuguese; 3) being authorized by their legal guardian to participate in the study; and 4) whose parents both answered the parental questionnaire. Therefore, the present study was conducted with a sample of 101 children aged 8 to 10 years old (54.5% third graders; 50.5% girls; M_{age} = 8.99 years old, *SD* = .685), the majority being of Portuguese nationality (94.1%; 2% Brazilian; 1% Angolan; 1% Syrian; 1% Cape-Verdean; 1% Romanian). 83.2% of the children had siblings and over half (53.5%) of them were the first-born child of at least one of their parents. On average, these children started non-parental care at the age of 14.81 months old (*SD* = 13.7; min = 3, max = 48) and currently spend approximately more than 8 hours a day at school (*M* = 7.80 hours, *SD* = 1.1; min = 5, max = 10).

Mother's ages averaged at 39.84 years old (*SD* = 5.07), ranging between 28 and 50 years of age. They were predominantly of Portuguese nationality (92.1%, 4% Brazilian, 1% Cape-Verdean, 1% Mexican, 1% Romanian, 1% Dutch). Concerning education and work, the mothers' level of education varied between six and 35 years of formal learning, averaging at 13.83 years (SD = 3.53), and they were mostly employed, whether it be full-time (86.1%) or part-time (4%). Likewise, they were also, for the most part, of Catholic faith (73.3%, 1% Orthodox, 3% Protestant, 2% other Christian, 1% Muslim, 1% other religion, 14.9% non-religious, 4% unknown).

Among the fathers, the results are fairly similar. Father's ages varied between 30 and 56 years of age, averaging at 41.98 years old (*SD* = 5.67) and they were mostly of Portuguese nationality (93.1%, 4% Brazilian, 1% Syrian, 1% Romanian). Their level of formal education was, on average, 12.17 years (*SD* = 3.97; min = 4, max = 38) and, as with the mothers, the fathers in this sample were mostly employed (91.1% full-time, 2% part-time). They were also, to a lesser extent

than the mothers in the sample, mostly Catholics (73.3%, 2% Orthodox, 2% Protestant, 2% other Christian, 1% Muslim, 1% other religion, 27.7% non-religious, 3% unknown). Moreover, over half of our caregiver sample were married (58.9%) and 28.7% were in a non-marital union, implying that the majority of the sample consisted of nuclear families (4.5% divorced, 4.9% other, 2.9% unknown).

One of this study's initial ambitions was to have multiple informants for the children's capacity for emotional regulation. Therefore, there was an effort to recruit the participation of the mother and the father of each participating child as well as their grade teacher, as an adult who, at these ages, spends a considerable amount of time with these children and can make informed observations on their behavior in a different context than that of their parents. Unfortunately, due to a lack of sociodemographic information, the questionnaires completed by the grade school teachers were not included.

MEASURES.

For the purpose of this study, we used sociodemographic questionnaires for the children and their caregivers, the Security Scale Questionnaire (Kerns et al., 2015) and Social-Emotional Responding Task (Malti, 2017) for the children, and the Emotional Regulation Checklist (Shields & Cicchetti, 1997) for each of the caregivers and each child's grade teacher.

SOCIODEMOGRAPHIC QUESTIONNAIRE(S).

Two separate sociodemographic questionnaires were used in this study. First, after the initial presentation and explanation of the study, the children were asked to complete a short sociodemographic questionnaire with their full name, age, gender, school grade and who they lived with, specifying the number of siblings, cousins and such. The caregivers completed another sociodemographic questionnaire which requested standard information about themselves such as age, nationality, marital status, level of education, employment status, religious belief, and about their child such as whether they were their firstborn, have siblings and, if so, how many, the age at which their child started non-parental care and approximately how long they spend at school per day.

SOCIAL-EMOTIONAL RESPONDING TASK (SERT; Malti, 2017).

The SERT assesses proneness for healthy guilt responses in children between the ages of 4 and 10 years old, by means of the "happy victimizer" paradigm. Firstly, children are presented with six social and ethical transgression scenarios and are asked to specify to what extent they would relate to feelings they might possibly feel as "the victimizer" and the reasoning behind those feelings (Malti, 2017).

Two of the scenarios portray aggressive actions of intentional harm towards another such as stealing a sweet from another child and pushing another child to take their place to receive a sweet. Another two of the transgression scenarios depict prosocial omission moments in which the child must imagine not sharing a sweet with another child and not helping another child in need when it would be socially expected to do so. The last two scenarios, which were excluded from the present study, portray social exclusion transgressions such as excluding another child due to non-familiarity or a lower socioeconomic status. The scenarios that were used during the interview were matched to the child's age and gender. For each of these scenarios, the children were asked if and to what extent they would feel a certain way for having done the illustrated transgression (i.e., "I would feel happy because I got the chocolate bar"). By means of three questions per transgression scenario, this instrument assesses proneness to (healthy) ethical guilt (i.e., "I would feel bad because the other child was ahead of me. It was unfair and she could've gotten hurt"), (healthy) non-ethical guilt (i.e., "I would feel bad because the teacher is watching and she's going to get angry at me") and absence of guilt. (i.e., "I would feel happy because I had chocolate"). These responses were chosen as they account for the predominant emotions and reasoning provided in the original version of the SERT, which was comprised of open-ended interviews (Malti et al., 2009).

This information is then complemented with a four-dimension (emotional regulation, healthy guilt, sympathy towards others and sympathy towards self) 29-item five-point Likert questionnaire that requires the child to affirm whether and to what extent they relate to sentences such as, for example, "I feel bad if I hurt another child" or "when i do something to another child which makes them sad, I feel bad" (Malti, 2017). For the purpose of this study, only four of the seven dimensions measured by the SERT were considered. The research-relevant dimensions of the instrument have shown good internal consistency within our sample, revealing good and

acceptable Cronbach's alphas for the ethical guilt (.81), non-ethical guilt (.78), absence of guilt (.74) and healthy guilt (.79) dimensions.

SECURITY SCALE QUESTIONNAIRE (SSQ; Kerns et al., 2015).

The SSQ is a 24-item, dual-dimension (Secure Base and Safe Haven) questionnaire, applied to 8- to 14-year-old children (Kerns et al., 1996), which measures how a child perceives the attachment quality of their relationship with each parental figure, and to what extent they perceive each caregiver as available and responsive (Kerns et al., 2015). The Secure Base (SBS) dimension encompasses seven items which concern the degree to which a child perceives a caregiver's encouragement, support and reassurance while exploring and learning, as well as making their own decisions (i.e., "Some children find it easy to trust their father BUT other kids aren't sure if they can trust their father"). The remaining items on the Safe Haven (SHS) dimension relate to the perceived degree of open communication about thoughts, emotions and needs, and whether they feel that they can count on their caregivers for help and/or comfort when experiencing distress or fear (i.e., "Some kids look for their father when they are angry or upset, BUT other kids don't look for their father when they are angry or upset."). Each item presents the child with a Harter (1982) format two-scenario sentence (i.e., "Some children find it easy to trust their mother, but other children aren't sure they can trust their mother") and the child must mark which scenario they relate to the most and then, whether they relate to it "very much" or "somewhat". Then, measured on a four-point scale, in which higher scores signify greater attachment security, the scores of each item can be averaged to ascertain a total score of attachment security.

The original study for the SSQ (Kerns et al., 2015) revealed good internal consistency, namely a .73 Cronbach's alpha for the SBS dimension and a .88 Cronbach's alpha for the SHS dimension, regarding mothers. Regarding fathers, the Cronbach's alphas were .74 for the SBS dimension and .90 for the SHS dimension. For the purpose of this study, we used the Portuguese version validated by Fernandes et al. (2021b), which has shown similar reliability estimates to the original. The Cronbach's alphas for the mother were .79 and .89 for the SBS and SHS dimensions, respectively and the Cronbach's alphas for the father was .83 and .91 for the SBS and SHS dimensions, respectively (Fernandes et al., 2021b). Our sample has revealed overall lower estimates than both previous versions. Specifically, the estimates for the mother were .68 and .74 for the SBS and SHS dimensions, respectively while the global attachment security composite

revealed an estimate of .81. However, regarding the reliability estimates for the father, while the SHS dimension has shown an alpha of .73, that of the SBS dimension is .48, which is below acceptable. Nevertheless, our global attachment security composite for the father revealed a good estimate of .78.

EMOTIONAL REGULATION CHECKLIST (ERC; Shields & Cicchetti, 1997).

The ERC measures children's emotional regulation capacity from the perspective of a close adult (Shields & Cicchetti, 1997), which in this case, are the caregivers and the grade teacher of each child. For children between the ages of 6 and 12 years of age, it is a dual-dimension (Negativity/Emotional Lability and Emotional Regulation) questionnaire of 24 four-point Likert items composed of sentences such as "[the child] gets easily frustrated" or "[the child] can say when they are sad, angry or scared". The Negativity/Emotional Lability dimension, which has eight items, assesses the adult's perceptions of the child's emotional reactivity and the intensity of their emotions, as well as their mood changes (i.e., "shows great mood swings" and "reacts angrily or with anger when adults impose limits"). On the other hand, the Emotional Regulation dimension assesses the adult's perception of the child's ability to adequately express emotions, empathy and emotional self-awareness (i.e., "can control their excitement during emotionally exciting situations" and "can say when they are sad, angry or scared"). Therefore, these two dimensions can be considered inversely proportional to one another, as a higher score in the Negativity/Emotional Lability subscale implies a lower score in the Emotional Regulation subscale and consequently a higher score in emotional dysregulation (Shields & Cicchetti, 1997).

The original study for the ERC (Shields & Cicchetti, 1997) showed good internal consistency for both dimensions. The questionnaire revealed Cronbach's alphas of .96 for the Negativity/Emotional Lability dimension and .83 for the Emotional Regulation dimension (Shields & Cicchetti, 1997). The Portuguese version by Melo (2005) was used for the present study, presenting lower but nevertheless good internal consistency values, namely .69 and .60 Cronbach's alphas for the Negativity/Emotional Lability and Emotional Regulation dimensions, respectively. The present sample has shown reliability estimates which stand between the previous studies, with a .82 Cronbach's alpha for the Negativity/Emotional Lability dimension and a .63 Cronbach's alpha for the Emotional Regulation dimension.

PROCEDURE.

The sample was recruited by contacting several primary schools around the country by email, with a broad explanation of the present study's aim, cross-sectional procedure, efforts to protect participant's data privacy and confidentiality, and the request to voluntarily participate in the study, which ultimately resulted in a 30% positive response rate out of the total 43 contacted schools. Subsequently, data collection was undertaken following permission from participating schools and informed consent of the children, caregivers and teachers. Considering the recommendations provided by the different school boards and teachers, this study used paper-administered versions of the consent forms, questionnaires and remaining measures.

Children completed the sociodemographic questionnaire and the parent-child attachment questionnaire in small, gender-paired, groups of two to six, during school hours in a separate classroom, accompanied by trained graduate students who explained the study, read out the instructions and answered questions. These graduate students were, then, tasked with interviewing the children with the social-emotional response measure, in equally small groups, using existing tablets to present the non-animated drawings of the transgression scenarios. The voluntary, non-assessment and confidential nature of the children's answer was heavily emphasized throughout this process.

When these measures were completed, each participating child was given an envelope and were informed that it contained a short sociodemographic questionnaire and an emotional regulation measure for both of their caregivers to complete independently. The response rate among the caregivers was 41% and 52% for fathers and mothers, respectively. Parental questionnaires which were only answered by one of the caregivers were excluded from the sample. These questionnaires were, then, collected at a later agreed-upon occasion.

DATA ANALYSIS.

Data analysis for this study was carried out using IBM SPSS Statistics 29 and Jamovi 2.3.28 for Windows, considering a significance probability value of 0.05 or less. Collected data has been treated in such a way as to guarantee the confidentiality of the participant's answers and scores, by means of a numeric code, known only to the main researcher.

Firstly, in order to organize and describe our study sample we relied on descriptive statistics, calculating and analyzing averages and standard deviation of quantitative variables such

as age and number of siblings, and frequencies and percentages for qualitative variables such as sex and marital status. This process was repeated a few times, allowing for database management and data cleansing.

Then, reliability estimates were run for each of the three instruments, comparing these to the Cronbach's alphas of the original and Portuguese versions of each as well as standardized metrics of acceptability. This confirmed for the majority of the instruments and their dimensions, descriptive statistics were undertaken for the relevant variables, providing averages, standard-deviation, minimum and maximum values for each so as to achieve our initial three specific objectives. Exceptionally, student's t-tests for paired samples were undertaken in order to examine the descriptive statistics and paired differences within the attachment security to the mother and the attachment security to the father (considering the two dimensions for both). Furthermore, student's t-tests for independent samples were conducted to ascertain whether there were significant gender-based differences in the averages and standard deviation for each variable. Pearson correlation coefficients between each study variable and the sociodemographic variables were also calculated to determine significant and relevant associations, followed by partial correlation coefficients to corroborate the (in)existence of covariable influences.

With a view to achieve our fourth to sixth objectives, we also ran Pearson correlations coefficients on the three main research variables, pairwise, examining the associations between attachment security and the guilt measures, attachment security and the emotion regulation measures and, finally, the emotional regulation and guilt measures. Having found significant correlations between the main variables, we proceeded to conduct hierarchical regression tests that would further characterize the nature of the relationship in the observed correlations, indicating direction and strength of impact.

Lastly, considering the one of the main objectives of the present study, the medmod module in Jamovi was used to ascertain the existence of a mediating effect of emotional regulation on the relationship between attachment security and ethical guilt.

III. RESULTS.

DESCRIPTIVE STATISTICS OF THE MAIN RESEARCH VARIABLES.

GUILT.

Consistent with the research and previous studies using this instrument, the average scores for healthy ethical guilt (M = 3.99, SD = 1.15), healthy non-ethical guilt (M = 3.67, SD = 1.17) and global healthy guilt (M = 3.93, SD = .93) were similar while the average scores for absence of guilt (M = 1.93, SD = 1.14) were significantly lower. These scores do not appear to be impacted by sex differences ($p > 0.05$).

These differences between the guilt dimensions (which include ethical guilt, non-ethical guilt and healthy guilt) and the absence of guilt dimension are observed further as correlations between them are shown (Table 4). Absence of guilt appears to be negatively correlated to ethical guilt, non-ethical guilt and healthy guilt which are, in turn, positively correlated between themselves. This is to say, for example, that children with high scores of non-ethical guilt also exhibit high scores of ethical guilt and healthy guilt but, on the other hand, low scores of absence of guilt.

Table 4.

Associations between ethical guilt, non-ethical guilt, absence of guilt and healthy guilt.

	Ethical Guilt	Non-Ethical Guilt	Absence of Guilt	Healthy Guilt
Ethical Guilt	1	**.74****	**-.31****	**.32****
Non-Ethical Guilt	**.74****	1	**-.21***	**.23***
Absence of Guilt	**-.31****	**-.21***	1	**-.21***
Healthy Guilt	**.32****	**.23***	**-.21***	1

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

Significant correlations were also observed between these measures and the number of siblings and family household sociodemographic variables ($p < 0.05$). More specifically, ethical guilt appeared to be negatively correlated to a child's number of siblings (r = -.21) and absence of

guilt was shown to be negatively correlated to the family household variable (r = -.20) in that higher the number of people who live with the child imply lower absence of guilt scores. However, partial correlations revealed that these variables wield a non-statistically significant influence over the relationships between the main variables.

ATTACHMENT SECURITY.

Considering the below standard reliability estimate for the secure base dimension for the father, this dimension was excluded from the present analysis (r = .46). Therefore, only the secure base and safe haven dimensions for the mother and the safe haven dimension for the father were taken into consideration.

Table 1.

Descriptive statistics for attachment security measures for each caregiver considering sex.

	Girls	Boys	Total		
	M (*SD*)	*M* (*SD*)	*M* (*SD*)	t (df)	*p*
Mother					
Secure Base	3.42 (± .47)	3.43 (± .47)	3.42 (± .47)	-.09 (99)	.93
Safe Haven	3.46 (± .45)	3.35 (± .47)	3.41 (± .45)	1.25 (99)	.22
Attachment Security	3.45 (± .42)	3.38 (± .39)	3.41 (± .41)	.87 (99)	.38
Father					
Safe Haven	3.28 (± .51)	3.27 (± .39)	3.27 (± .45)	.11 (93.3)	.91
Attachment Security	3.31 (± .44)	3.29 (± .36)	3.31 (± .40)	.31 (99)	.76

*Correlation is significant at the 0.05 level.

Once again, regarding the attachment measures, there were no significant caregiver, age or sex-based differences observed in the present sample (Table 1; $p > 0.05$). Moreover, as expected, there were positive and significant correlations between the attachment dimensions for the same caregiver and between caregivers, or in other words, higher secure base scores with the mother were positively correlated to both safe haven scores with the mother and the father and vice-versa (Table 2). Significant correlations were also observed between these dimensions and sociodemographic variables such as family household (r = -.19), father's age (r = .21) and the

number of hours spent at school (r = -.24) but having conducted partial correlations these were found to have a statistically non-significant impact on the main correlations between attachment dimensions.

Table 2.

Associations between attachment security measures within and across caregivers.

	Mother			Father	
	Secure Base	Safe Haven	Attachment Security	Safe Haven	Attachment Security
Mother					
Secure Base	1	**.57****	**.79****	**.46****	**.49****
Safe Haven	**.57***	1	**.95****	**.65****	**.62****
Attachment Security	**.79****	**.95****	1	**.65****	**.62****
Father					
Safe Haven	**.46****	**.65****	**.65****	1	**.95****
Attachment Security	**.49****	**.62****	**.65****	**.95****	1

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

EMOTIONAL REGULATION.

Considering the dimensions of the emotion regulation measures, and reiterating the exclusion of the emotion regulation dimension reported by the fathers due to unsatisfactory reliability estimates (r = .36), both caregivers reported lower emotional lability scores (M_{mother} = 1.83, SD = .33; M_{father} = 1.82, SD = .52) and mothers reported higher emotion regulation scores (M_{mother} = 3.30, SD = .33). Subsequently, the overall lability and emotional regulation scores (M_{lablity} = 1.82, SD = .35; $M_{\text{emotion regulation}}$ = 3.26, SD = .45) followed the same pattern. Similar to what was revealed with the attachment measures, there were no significant sex-based differences ($p > 0.05$).

Table 3 demonstrates the significant correlations between the dimensions of emotion regulation within and across caregivers. Mostly, these are significant correlations that are congruent with previous studies. However, surprisingly, no significant correlation was shown to exist between

the emotional lability reported by the fathers and the emotion regulation dimension reported by the mothers, as well as the overall emotion regulation scores. Furthermore, we would like to highlight that, notwithstanding the lack of statistical significance ($p > 0.05$), the positive correlations between the lability and the global emotion regulation scores reported by the fathers, and the global emotion regulation scores are unusual but possibly explained by the unsatisfactory reliability estimates of the emotion regulation scores reported by the fathers.

Table 3.

Associations between emotion regulation dimensions and global scores within and across caregivers.

	Mother			**Father**			
	Lability	Emotion Regulation	Global	Lability	Global	Lability	Emotion Regulation
Mother							
Lability	1	**-.23***	**-.89****	**.478****	**-.41****	**.83****	**-.33****
Emotion Regulation	**-.23***	1	**.64****	-.14	**.28****	**-21****	**.79****
Global	**-.89****	**.64****	1	**-.44****	**.45****	**-72****	**.63****
Father							
Lability	**.48****	-.14	**-.44****	1	.19	**.90****	.08
Global	**-.41****	**.28****	**.45****	.19	1	-.11	**.68****

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

Moreover, covariables were revealed to influence the correlations between the emotion regulation scores reported by the mother and the lability scores reported by the father, namely the children's age and family households. While younger children were reported by their mothers to be higher on emotion regulation than older children (r = -.10), children in larger family households were reported by their fathers to experience more lability or emotional negativity (r = -.08).

ASSOCIATIONS BETWEEN MAIN RESEARCH VARIABLES.

ATTACHMENT AND EMOTION REGULATION.

Table 5 presents the correlation between the attachment measures and the global emotional regulation variables from each of the caregivers, and the global composite of the two for each emotion regulation dimension. Only the safe haven support dimension to the mother and the composite attachment security variable have shown significant correlations with the global emotional scores and the composite scores, implying that children who reported higher attachment security to their mother, specifically safe haven support scores, also were reported to be more capable of emotional regulation by both their mother and their father, separately and collectively ($p < 0.05$).

Table 5.

Associations attachment security measures and global emotion regulation across caregivers

		Mother		**Father**	
	Secure Base	Safe Haven	Attachment Security	Safe Haven	Attachment Security
Mother					
Global Emotion Regulation	.18	**.32****	**.30***	**.21***	.19
Father					
Global Emotion Regulation	.19	**.27****	**.27***	**.31****	**.29***
Lability	-.13	**-.26***	**-.25***	-.14	-.12
Emotion Regulation	**.19***	**.28***	**.28***	.18	.17

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

EMOTION REGULATION AND GUILT.

Table 6 shows correlations between the global emotion regulation scores perceived by the mother and the father and the ethical, non-ethical and healthy guilt, and absence of guilt scores. Non-ethical guilt and, more importantly, healthy guilt weren't significantly correlated to the

emotion regulation scores ($p > 0.05$). However, ethical guilt was shown to be significantly correlated with both emotion regulation scores ($p < 0.05$), meaning that children who reported higher scores of ethical guilt were also reported to be more emotionally regulated.

Table 6.

Associations between global emotion regulation across caregivers and guilt measures.

	Mother Global Emotion Regulation	Father Global Emotion Regulation	Lability	Emotion Regulation
Ethical Guilt	**.27****	**.25***	**-.23***	.18
Non-Ethical Guilt	.06	.11	**-.19***	-.06
Absence of Guilt	.01	-.03	-.06	-.03
Healthy Guilt	.08	.08	-.09	.03

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

ATTACHMENT AND GUILT.

Table 7 illustrates significant correlations between the attachment measures and the guilt measures. Of the four relevant guilt measures, the ethical guilt variable appears to be the only one which revealed significant positive correlations with the three attachment security dimensions, implying that children that reported higher attachment security also reported higher scores of ethical guilt. Conversely, non-ethical guilt is the only guilt measure which doesn't appear to be significantly correlated to any of the attachment dimensions. As to be expected, as ethical guilt and attachment security seem to share a direct association, the absence of guilt, which is inversely correlated to ethical guilt, is observed to be negatively correlated to attachment security, with significant results regarding the safe haven dimensions for both mother and father. Healthy guilt, even though correlated to ethical and non-ethical guilt, surprisingly was shown to only be significantly correlated to the safe haven dimension for the father.

Table 7.

Associations between attachment security measures and guilt measures.

	Mother			Father	
	Secure Base	Safe Haven	Attachment Security	Safe Haven	Attachment Security
Ethical Guilt	**.25***	**.29***	**.31***	**.31****	**.29***
Non-Ethical Guilt	.12	.14	.15	.13	.11
Absence of Guilt	-.12	**-.21***	**-.20***	**-.36****	**-.30***
Healthy Guilt	.10	.17	.16	**.25***	**.27***

Correlation is significant at the 0.01 level; *Correlation is significant at the 0.05 level.REGRESSION STATISTICS OF THE MAIN RESEARCH VARIABLES.**

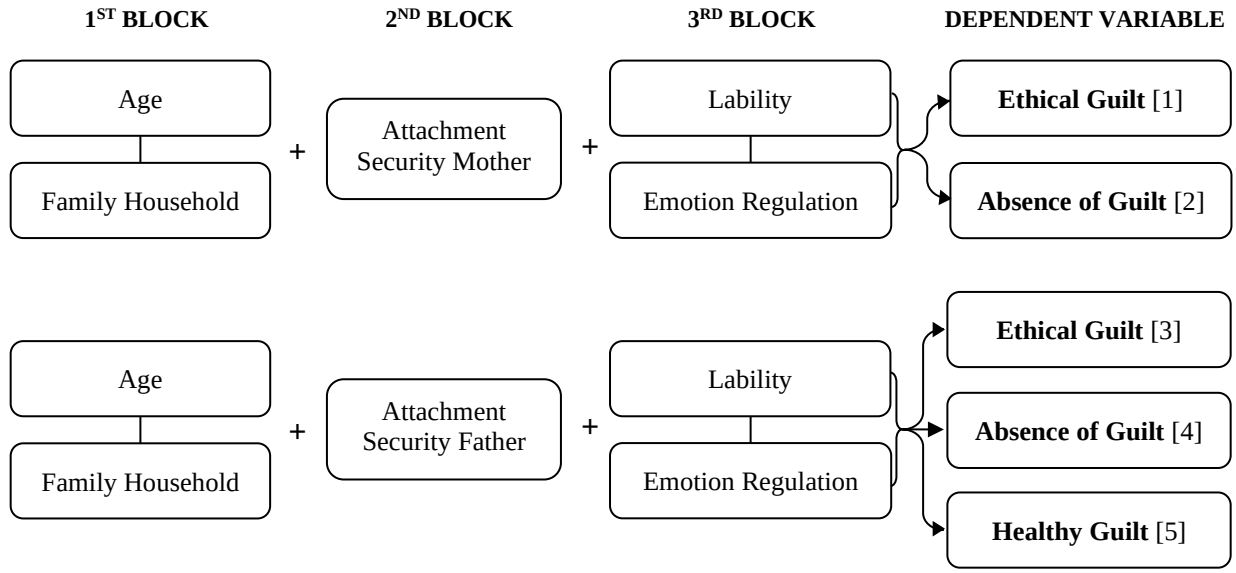
Considering the significant correlations established between the main research variables, hierarchical regression model analyses, with two blocks of variables, were performed in order to further comprehend the nature of these associations, namely as to their direction and strength of impact. Ultimately, five three-block hierarchical regression models were examined. The first block contemplates our identified covariables, age and family household, the second block encompassed the attachment security dimensions to each caregiver as predictors of each of the significantly correlated guilt dimension, with the emotion regulation dimensions perceived by each caregiver included in the third variable block (Figure 2).

MODEL 1: ATTACHMENT SECURITY TO THE MOTHER, EMOTION REGULATION AND ETHICAL GUILT.

Results showed that our covariables did not significantly account for variance in our ethical guilt scores [F (2,98) = 1.12, p = .33, R^2 = .02]. However, the addition of attachment security to the mother to the model revealed an overall increase in the model's fit (ΔR^2 = .09), which is statistically significant [F (1,97) = 4.04, p < .05, R^2 = .11]. The addition of the collective emotion regulation predictors to the model did not reveal a significant increase of the model's fit.

Figure 2.

Three-block hierarchical regression models encompassing covariables (age and family household), attachment security, emotion regulation perceptions and guilt dimensions.



MODEL 2: ATTACHMENT SECURITY TO THE MOTHER, EMOTION REGULATION AND ABSENCE OF GUILT.

Results showed that our covariables significantly and collectively accounted for variance in our absence of guilt scores [F (2,98) = 4.13, $p < .05$, $R^2 = .07$]. Considering the unstandardized coefficients of each of the individual covariables, only the family household (ß = -.29, t = -2.09, $p = .04$) appears to significantly impact our dependent variable. Then, the addition of attachment security to the mother to the model revealed an overall increase in the model's fit ($\Delta R^2 = .05$), which is statistically significant [F (1,97) = 4.42, $p < .05$, $R^2 = .12$]. The addition of the collective emotion regulation predictors to the model did not reveal a significant increase of the model's fit.

MODEL 3: ATTACHMENT SECURITY TO THE FATHER, EMOTION REGULATION, AND ETHICAL GUILT.

Results showed that our covariables did not significantly account for variance in our ethical guilt scores [F (2,98) = 1.12, $p = .33$, $R^2 = .02$]. However, the addition of attachment security to the father to the model revealed an overall increase in the model's fit ($\Delta R^2 = .07$), which is statistically significant [F (1,97) = 3.22, $p = .03$, $R^2 = .09$]. The addition of the collective emotion regulation predictors to the model did not individually reveal a significant increase of the model's fit.

MODEL 4: ATTACHMENT SECURITY TO THE FATHER, EMOTION REGULATION, AND ABSENCE OF GUILT.

Similar to our model which also examined our variables' impact on absence of guilt, results showed that our covariables significantly and collectively accounted for variance in our absence of guilt scores [F (2,98) = 4.13, p = .02, R^2 = .08]. Once again, considering the unstandardized coefficients of each of the individual covariables, only the family household (β = -.29, t = -2.09, p = .04) appears to significantly impact our dependent variable. Then, the addition of attachment security to the father to the model revealed an overall increase in the model's fit (ΔR^2 = .11), which is statistically significant [F (1,97) = 7.46, p < .001, R^2 = .19]. The addition of the collective emotion regulation predictors to the model did not individually reveal a significant increase of the model's fit.

MODEL 5: ATTACHMENT SECURITY TO THE FATHER, EMOTION REGULATION AND HEALTHY GUILT.

Results showed that our covariables did not significantly account for variance in our ethical guilt scores [F (2,98) = .47, p = .63, R^2 = .01]. However, the addition of attachment security to the father to the model revealed an overall increase in the model's fit (ΔR^2 = .07), which was statistically significant [F (1,97) = 2.62, p = .01, R^2 = .08]. The addition of the collective emotion regulation predictors to the model did not reveal a significant increase of the model's fit.

To summarize, out of the five hierarchical regression models that were conducted, every model showed that attachment security to caregivers significantly predicted the examined guilt dimensions. Moreover, none revealed a significant impact of the emotion regulation capacity perceived by the caregivers. Differences between the models were observed regarding the predicting power of our variables, age of the child and family household. The two models which examined the predictive power of our independent variables on absence of guilt scores, Model 2 and Model 4, showed a significant impact of family household.

EMOTION REGULATION MEDIATION EFFECT MODEL.

Lastly, regarding our last research objective, mediation analyses were performed to ascertain the existence of a mediating effect of the children's capacity of emotion regulation perceived by their parents on the relationship between their attachment security and their proneness to healthy guilt. Considering our correlation and regression analyses results we ran two distinct mediation models. Our first mediation model considers attachment security to the mother (SEC_M)

as the predictor variable, ethical guilt (EG) as the dependent variable and the global emotion regulation capacity perceived by the mother (ERG_M).

Table 8 illustrates that the total effect of attachment security to the mother on ethical guilt is statistically significant ($p < .001$). With the integration of emotion regulation perceived by the mother as a mediating variable, the impact of attachment security to the mother on ethical guilt was still significant ($p < 0.05$). The indirect effect of attachment security on ethical guilt via emotion regulation was not significant ($p > 0.05$). Therefore, there is no significant mediating effect.

Table 8.

Mediation model of emotion regulation on the relationship between attachment security to the mother and ethical guilt.

			95% Confidence Interval				
Effect	Estimate	SE	Lower	Upper	Z	*p*	% Mediation
Indirect	0.16	0.13	- 0.02	0.48	1.25	0.21	18.8
Direct	0.71	0.30	0.09	1.26	2.34	0.02	81.2
Total	0.88	0.25	0.37	1.37	3.46	< .001	100.0

Our second mediation model follows the same reasoning but regarding the father, considering attachment security to the father (SEC_F) as the predictor variable, ethical guilt (EG) as the dependent variable and the global emotion regulation capacity perceived by the father (ERG_F).

Table 9 demonstrates that the total effect of attachment security to the father on ethical guilt is statistically significant ($p < .05$). With the integration of emotion regulation perceived by the father as a mediating variable, the impact of attachment security to the mother on ethical guilt was still significant ($p < 0.05$). The indirect effect of attachment security on ethical guilt via emotion regulation was, however, not significant ($p > 0.05$). Once again, there is no significant mediating effect.

Table 9.

Mediation model of emotion regulation on the relationship between attachment security to the mother and ethical guilt

			95% Confidence Interval				
Effect	Estimate	SE	Lower	Upper	Z	*p*	% Mediation
Indirect	0.16	0.09	- 0.02	0.36	1.85	0.07	18.9
Direct	0.67	0.31	0.03	1.28	2.15	0.03	81.1
Total	0.83	0.29	0.23	1.39	2.78	<0.05	100.0

IV. DISCUSSION.

The main purpose of the present study is to contribute to the empirical understanding of how attachment security relates to healthy guilt proneness in middle childhood and to ascertain whether children's capacity for emotional regulation has a mediating effect on this relationship. Therefore, we undertook a series of descriptive, correlative and regression analysis in order to individually examine these variables and the relationships between them.

DESCRIPIVE AND CORRELATIVE ANALYSIS OF RESEARCH VARIABLES.

First of all, descriptive analysis on the dimensions of guilt showed similar average scores of ethical guilt and healthy guilt and, inversely, considerably lower scores of absence guilt, results which were confirmed by their significant correlations. These results are in line with theoretical conceptualizations of these dimensions (e.g., Malti, 2016) as well as empirical evidence found in previous studies (e.g., Nocentini et al., 2020). Our results also revealed a positive correlation between ethical guilt and non-ethical, with a somewhat lower reported score average of non-ethical when compared to ethical guilt. Thus, this suggests that our sample is slightly more prone to experiencing other-oriented concern than concern based on fear of punishment, and consequently, more likely to display reparative and prosocial behavior after committing a transgression. However, it also contradicts the growing empirical evidence that highlights non-ethical guilt as a possible inverse emotion to adaptive ethical guilt (e.g., Tani & Ponti, 2018). To further understand this non-ethical dimension of guilt, studies that examined children's predisposition to, at least, both ethical

and non-ethical guilt alongside a behavior measure and preferably longitudinally, in order to ascertain causality.

Adding to this conundrum, contrary to expected. correlations between the dimensions of ethical and non-ethical were higher than that of ethical guilt and healthy guilt. Considering that both the ethical guilt and healthy guilt measures should assess the same other-oriented concern and regards for fairness (Malti et al., 2017) it would be expected that these would be more correlated. The fact that, even though they should be measuring the same (or very similar constructs), they were measured with essentially different methods might account for this aspect which is limitation of this study which will be addressed further.

There were no significant age differences found in our sample which considering existing knowledge on the development of guilt, that requires the acquisition of complex cognitive processes subject to a great degree of individual variability (Malti & Dys, 2015), was somewhat unexpected. However, research has suggested that the development and understanding of guilt is established around the age of 8 years old (Berti et al., 2000; Olthof et al., 200) and, therefore, our participants might have, as a whole, achieved this development stage. Further studies, contemplating a wider range of age groups, especially younger ages, with a longitudinal approach might provide insights further insights into these results.

Then, descriptive analyses on the attachment measures revealed average scores of attachment security to both father and mother similar to previous studies conducted with Portuguese samples (e.g., Fernandes et al., 2021b). Moreover, as with previous studies (e.g., Kerns et al., 2015; Fernandes et al., 2021b) all the dimensions that were considered to be statistically reliable were positively and significantly correlated, within and across caregivers, adding to the already wealthy empirical evidence on how children organize their attachment security around both primary caregivers equally (Fernandes et al., 2021b).

Finally, our descriptive analysis of the emotion regulation measures found a general compatibility between the different caregivers' average scores of perceived lability as well as the overall lability and emotion regulation scores - lower scores of perceived lability were inversely correlated to perceived emotion regulation, almost all throughout the board. These results corroborate a wide range of previous research (e.g., Thompson, 1994; Shields & Cicchetti, 1997). Yet, not all of our correlations were as expected. Non-significant correlations were found between

lability and global emotion regulation perceived by the fathers, as well as lability perceived by fathers and the emotion regulation scores reported by the mother. While these results concerning the attachment to the mother contradict existing established literature (e.g. Cooke et al., 2019), they are not completely surprising. Fernandes et al. (2021a) didn't find a significant association between emotional regulation, measured by the ERC, and attachment security to the mother, suggesting that these results and differences across caregivers' results might be due to the conceptualization of emotion regulation assessed with the SERT and the different roles that the nature of typical mother-child and father-child interactions might play within the regulatory control system (Fernandes et al., 2021a). More specifically, Shields and Cicchetti (1997) focused the concept of emotion regulation on differences within situations which could be considered emotionally arousing which are more likely to occur during father-child interactions (Fernandes et al., 2021a), and therefore being more likely to contribute to emotion regulatory skills (Brumariu, 2015).

Moreover, there were significant negative correlations found between the children's age and their global emotion regulation reported by the mothers'. Unexpectadly, younger children were reported to have higher global emotion regulation than older children. These results seem to be quite contradictory to previous studies (e.g., Fox, 1994; Shields & Cicchetti, 1997; Thompson, 2011; Zimmerman & Iwanski, 2014), which assert that emotion regulation is a socioemotional competence which an individual matures into, according to their biological, psychological and social conditions. Then, family household also appeared as negatively correlated with the lability scores perceived by the fathers, in that children in larger family households were perceived as displaying higher emotional lability. Research has long approached the impact of family-factors in a child's development of emotion regulation competences, having shown the important role of parental and family impact in emotion socialization (e.g., De Raeymaecker & Dhar, 2022), in which, for example, parental stress and household chaos (which contemplates family household size) negatively influence children's capacity for emotion regulation (e.g., Shaffer et al., 2011), evidence which our results contradict. However, both these results might be explained by the unsatisfactory reliability estimates of the emotion regulation scores reported by the fathers.

RESEARCH HYPOTHESES AND CONJECTURES.

Considering the first (and only) established research hypothesis, our results as expected have shown that there is a significant relationship between the attachment security to the mother

and our examined emotion regulation dimensions. That is to say that children with higher reported attachment security to their mother, are also perceived to have greater emotion regulation and less emotional negativity.

These results corroborate the extensive empirical evidence that illustrates that higher attachment security to a caregiver is related to higher capacity for emotion regulation (e.g., Cassidy, 1994; Sroufe, 1996; Waters et al., 2010; Thompson et al., 2014; Cooke et al., 2019) and, ultimately, Bowlby's own statement that the parent-child relationship is a primary building block for a child's ability to self-regulate, through initially external regulation and, then, with time, the internalization and later deployment of these regulatory processes independently. The parental responsiveness and sensitivity that originates a secure attachment, allows for the establishment of an internal working model which encompasses emotion understanding and awareness (Brumariu et al., 2012), open and elaborate emotion communication, and a core belief that one is capable of withstanding and managing emotional distress (Thompson, 2014). On the other hand, attachment security to the father did not provide such clear-cut results which might be connected to the fact that both these measures contemplate a measure dimension which was not considered to be statistically reliable.

Then, due to the previously mentioned exploratory nature of our study, we were only able to speculate our remaining hypotheses – that there would be significant positive correlations between both the perceived emotion regulation capacity of the children and attachment security, with the children's proneness to the healthy guilt dimensions – ethical guilt, non-ethical guilt and healthy guilt. We found a significant positive relationship between the global emotion regulation reported by the caregivers and the children's ethical guilt dimensions scores. Then, the composite lability dimension was also shown to be significantly and negatively correlated to these and the non-ethical guilt scores, suggesting that children who are perceived as having lower levels of emotional negativity are those who report themselves as prone to experiencing ethical guilt and non-ethical guilt. Once again, these results point to a possible connection between ethical and non-ethical forms of guilt and their adaptive value.

Contrary to expectations, healthy guilt scores were significantly correlated to the emotion regulation perceptions. With the ethical guilt dimension essentially measuring the same concept, healthy guilt should be equally correlated with the reported emotion regulation scores. However, not only is healthy guilt not significantly correlated with emotion regulation, the correlation

coefficient is much lower than that of ethical guilt and the remaking emotion regulation dimensions. These results, together with the lower correlation between the ethical guilt and the healthy guilt dimensions further suggest the possibility that they, in fact, are measuring related but distinct concepts.

Concerning attachment security and proneness to the guilt measures, our results revealed a significant relationship between children's attachment to both mother and father, and their reported ethical scores. So, in other words, children who reported higher attachment security also reported higher proneness to ethical guilt. This is congruent with previous studies, with adolescents and adults, in which slightly different conceptualizations of adaptive forms of guilt are considerably impacted by attachment security (e.g., Lopez et al., 1997; Mikulincer & Shaver, 2005). Secure people, who are characterized by a stable self-esteem, self-worth and self-confidence, are more likely to react to a transgression scenario for which they were responsible with a reparative action (Mikulincer & Shaver, 2005), informed by the compassionate and capable internal working models (Thompson, 2014).

Then, as inversely correlated with ethical guilt, it was expected that absence of guilt would be inversely and significantly correlated with all attachment dimensions. However, this was found to be true regarding every examined attachment dimension except the secure base support to the mother. One explanation for this specificity of the safe haven support dimension (also considering that our lowest and less significant attachment dimension correlation to ethical guilt was also the secure base support to the mother) might be that as ethical guilt arises from a transgression or a wrongdoing and the resulting negative emotional experience, it is the safe haven support system of the child that is activated and, therefore, is the attachment security dimension which is most highlighted in the experience of guilt, suggesting a central safe haven support role in guilt at this age.

Conversely, our non-ethical guilt scores were not significantly correlated to any of the attachment dimensions which might be partially explained by the fact that fear of punishment for transgressing on moral and social norms (Malti, 2016; Nocentini et al., 2020) might be more related to a parent-behavior variable such as parental practices or styles than attachment security itself. Then, our results on the relationship with healthy guilt, once again, reveal considerable differences

compared to ethical guilt, as healthy guilt is only shown to be correlated to safe haven and attachment security to the father measures.

For further understanding of these correlations, their direction and strength, we conducted three-block hierarchical regression models which showed that, overall, both security attachment to the mother and to the father significantly predicts ethical guilt scores, without any significant improvement when emotion regulation scores were introduced. Moreover, these results revealed a significant predictive impact of family household in the absence of guilt, namely, that children in a reported lower family household appear to report higher absence of guilt scores.

Lastly, the expected mediating effect of emotion regulation on the relationship between attachment security and the ethical guilt proneness was, unfortunately, not found. This result doesn't abide the results of previous studies, that have shown a, at least, partial mediation effect of emotion regulation capacity on this relationship to the experience of guilt (e.g., Murphy et al., 2015; Szentágotai-Tatar & Miu, 2016) or, for that matter, the experience of other related emotions such as empathy (e.g., Panfile & Laible, 2012).

LIMITATIONS AND FUTURE IMPLICATIONS.

Any attempt to thoroughly discuss these results and their significance, must acknowledge the present study's limitations, some which have been already addressed. First of all, our sample can be considered quite homogeneous in terms of nationality and religious belief, as well as also being recruited from a predominantly urban population. Considering the cultural nature of morality and, consequently, moral emotions (Robins & Schriber, 2009; Malti, 2016), a more culturally and ethnically diverse sample could further inform our understanding of healthy guilt as a whole, as well as differences in the prevalence of the ethical and non-ethical variations of guilt.

Moreover, in terms of sample limitations, the sheer size of our study's sample is considered a significant limitation. Even though we consider that this study contributes to the still comparably small portfolio of research comparing data from two caregivers, due to the widely recognized difficulty in recruiting both caregivers, we recognize that it might have had a significant effect on our results. With this in mind, even though, the first half of the SERT (Malti, 2017) is considered a structured interview and, therefore, doesn't require an *n* size as large as other quantitative measures, the second half of the SERT, the SSQ (Kerns et al., 2015) and the ERC (Shields & Cicchetti, 1997) are self-report questionnaires which automatically requires a larger sample size

than that was recruited for this study. Some of the incongruences with previous literature within the dimensions measured by this instrument, in terms of the reliability estimates and dimension correlations may be due to this factor. However, it is interesting that even though the second half of the SERT is also a self-report questionnaire, it has shown good reliability. Another consideration for further research with these variables and, specifically, these measures. Also, concerning our sample, we must account for the fact that there was little variability found amongst our participants, as they were predominantly securely attached, perceived as being emotionally regulated and prone to ethical and healthy guilt, which might have contributed to the lack of expected sex and age-based differences and consequent results.

Furthermore, the questionnaire aspect of the study's measures also brings up concerns over the impact of social desirability, reactivity and peer influence over our results. Namely, the small group application of these measures at this age sometimes implied parallel conversation and/or comments from peers which might have influenced certain responses. Moreover, anecdotally, our interviewers mentioned that there was repeated reticence towards specific items of the SERT (Malti, 2017) which were later understood to be, in many cases, items related to the healthy guilt dimension such as "I feel bad when I hurt other children", for example. These aspects must be taken in to consideration, especially considering the lack of significant correlations between our healthy guilt measure and most of the attachment and emotion regulation dimensions.

Finally, interviewers also reported quite substantial and general reading and interpretation difficulties from our participants. This does not come as a surprise. Learning progress has been significantly affected by the latest events of the COVID-19 pandemic, with reports suggesting a decline by an average of 20 percent in reading skills in Europe and Central Asia (Jabukowski et al., 2023), and a possible 11 percent averaged decline within the European Union (De Witte & François, 2023). Considering this data and the relative complexity of the SSQ (Kerns et al., 2015) and the fact that the questionnaire section of the SERT (Malti, 2017) was mostly done individually, (even though help was always on hand), it is quite possible that these circumstances might have affected the study.

To our knowledge, the present study has been the first to examine these relationships within this developmental conceptualization of healthy guilt, considering the impact of emotion regulation

and, specifically, within this particular age group. As such, it has an inherent exploratory nature which allows for mere conjectures that, regardless, provide some "first steps" into this subject.

Having corroborated previous studies concerning the considerable impact of attachment security on emotion regulation and on proneness to experiencing adaptive dimensions of guilt, (and, to a certain extent, the association between emotion regulation and moral guilt) it has nonetheless highlighted the need for additional research surrounding these variables.

Further research surrounding these themes would, as mentioned, benefit from a longitudinal design which could not only breach the gaps in knowledge about the development of guilt over time but also provide some information about causality in these relationships. Furthermore, as these distinctions between forms of guilt are further examined and better understood, the developmental pathways associated to each, whether adaptive or maladaptive, should be at the center of future research questions. Then, considering the above-mentioned complexity in the assessment of moral emotions in general, and guilt in particular, a deeper exploration of assessment less direct methods which seek to minimize limitations such as reactivity or social desirability and provide biological and neurophysiological correlates should be taken on. Such suggestion can also be applied to the measurement of emotion regulation, as we consider that a more biological and/or neurophysiological measure could be a more accurate instrument of the aspects of emotion regulation that are involved in the mediation between attachment security and experience of emotion Lastly, considering that a fundamental aspect of adaptive guilt is the cognitive and emotional concern for others (Malti, 2016; Mehrotra et al., 2022), it could be particularly interesting to examine associations between this form of guilt and empathy, especially as research has also shown how empathy, attachment and emotion regulation are interconnected (Panfile & Laible, 2012) in a similar manner as expected with guilt.

Considering the ever-growing theoretical and empirical research on the role of guilt on individual and societal well-being, research that provides insight into how it develops is important also on a practical basis. Inform practices, programs and interventions, in order to be able to not only actively approach these issues as they arise but also from a preventive, developmental perspective that seeks to address challenges before they arise, creating the conditions for a healthy and adaptive experience of guilt and, consequently, a healthier and increasingly prosocial society. We hope to have contributed to this effort on a theoretical basis but, also, highlight the important

need for practical intervention-based research which allows for a more informed and actionable knowledge of guilt and its place in human development.

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