



DEVELOPMENT OF SYMPATHY DURING CHILDHOOD:  
ATTACHMENT RELATIONSHIPS, FEELINGS OF GUILT AND  
RESPECT

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Thesis submitted as a partial requirement for the degree of:

DOCTORATE IN PSYCHOLOGY

Specialty in..... Developmental Psychology



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*To my very, very little and beloved nephew, Manuel*

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**Palavras-chave:**

simpatia; culpa; respeito; pró-socialidade; relações de vinculação; regulação emocional, desenvolvimento moral; desenvolvimento socio-emocional.

**Keywords:**

sympathy; guilt; respect; prosociality attachment relationships; emotion regulation; moral development; socioemotional development.

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## Resumo

A presente dissertação centrou-se no desenvolvimento socio-emocional e moral da criança, com ênfase na emergência de emoções morais e gentis, como a simpatia, a culpa e o respeito. Em particular, focando-se na simpatia enquanto preocupação com o estado de sofrimento do outro, investigando os seus preditores (nomeadamente, vinculação) e *outcomes* socio-emocionais associados (como comportamentos pró-sociais). A base teórica (Capítulo I) assentou em contributos fundamentais da Psicologia do Desenvolvimento e da filosofia moral, nomeadamente a teoria da vinculação de Bowlby, o modelo de desenvolvimento moral de Piaget e a perspetiva kantiana sobre o respeito pelo outro.

Este percurso iniciou-se com duas revisões sistemáticas da literatura. A primeira (Capítulo II) abordou a relação entre a qualidade da vinculação e emoções morais, revelando uma escassez de estudos centrados especificamente na simpatia. Estudos selecionados usavam modelos distintos, e referiam-se de forma intercambiável aos conceitos de empatia e simpatia, o que dificultou uma análise diferenciada. Ainda assim, destacou-se a importância da vinculação segura – caracterizada por sensibilidade, responsividade e comunicação aberta sobre emoções – enquanto facilitadora da regulação emocional e de emoções morais adaptativas. Este efeito da segurança vinculativa está evidenciado na literatura não só no domínio emocional, mas no comportamental, que se aprofundou no estudo seguinte.

A segunda revisão (Capítulo III) focou-se na relação entre vinculação e comportamentos pró-sociais, evidenciando um número ligeiramente maior de estudos e interligações entre desenvolvimento emocional e comportamental. Em ambas as revisões, identificou-se a ausência de estudos com crianças em idade pré-escolar – uma limitação relevante, dado o reconhecimento desta fase como crítica para o desenvolvimento socio-emocional e moral.

O estudo empírico subsequente (Capítulo IV) procurou colmatar estas lacunas, examinando longitudinalmente a influência da vinculação na simpatia e na culpa, mediada pela regulação emocional, em 74 crianças com 4 anos. A qualidade da vinculação explicou a simpatia (pelo próprio e pelo outro) e a culpa saudável (ética como não-ética), com mediação significativa da regulação emocional em todos estes domínios, exceto na simpatia pelo outro. Estas emoções correlacionaram-se negativamente com comportamentos de isolamento, reforçando o papel da vinculação e da regulação emocional no desenvolvimento de competências sociais. Tais resultados sugerem potenciais implicações clínicas, particularmente na elaboração de programas de intervenção precoce.

O estudo final (Capítulo V) aprofundou a relação entre simpatia e respeito, envolvendo entrevistas a 53 crianças. Exploraram-se as suas conceptualizações e raciocínios sobre o respeito,

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bem como os níveis de simpatia (de autorrelato e relata pelos pais). Os resultados indicaram que a simpatia se associou positivamente a definições pró-sociais de respeito, enquanto conceptualizações baseadas na autoridade se correlacionaram com menores níveis de simpatia. Foram ainda analisadas variáveis sociodemográficas que possam influenciar esta relação.

Estes contributos convergem para a importância das relações de vinculação na emergência de emoções morais e da pró-socialidade na infância, e no bem-estar relacional e individual associado, influenciando comportamentos sociais relacionados com estas emoções, como as manifestações de respeito. Possibilitando, assim, o desenvolvimento e intervenções destas ferramentas emocionais desde cedo, apontando para a necessidade de mais investigação com amostras diversificadas e instrumentos ainda mais adequados para idades pré-escolares.

## Abstract

This dissertation centered on children's socio-emotional and moral development, with an emphasis on the emergence of moral and kind emotions such as sympathy, guilt and respect during childhood. It focused on sympathy as concern for the state and suffering of others, investigating its predictors (namely, attachment relationships), and associated socio-emotional outcomes (such as pro-social behavior). The theoretical framework (Chapter I) was based on fundamental contributions from developmental psychology and moral philosophy, namely Bowlby's attachment theory, Piaget's model of moral development and the Kantian perspective on respect for others.

The journey began with two systematic literature reviews. The first (Chapter II) looked at the relationship between attachment quality and moral emotions, revealing a scarcity of studies centered specifically on sympathy. The studies found used mostly distinct models and referred interchangeably to the concepts of empathy and sympathy, which prevented a differentiated analysis. Even so, the relevance of secure attachment - characterized by sensitivity, responsiveness and emotional communication - as a facilitator of emotional regulation and the emergence of adaptive moral emotions was highlighted. This effect of secure attachment is evidenced in literature not only in the emotional domain, but also in the behavioral domain, which was explored in greater depth in the following study.

The second review (Chapter III) focused on the relationship between attachment and pro-social behavior, showing a slightly larger number of studies and revealing interconnections between emotional and behavioral development. In both reviews, the absence of studies with pre-school children was identified - a relevant limitation, given the recognition of this stage as critical for socio-emotional and moral development.

The subsequent empirical study (Chapter IV) sought to fill these gaps by longitudinally examining the influence of attachment on sympathy and guilt, mediated by emotional regulation, in 74 children aged 4. Attachment security explained sympathy (including for oneself and for others) and healthy guilt (both ethical and non-ethical), with significant mediation by emotion regulation in all these domains, except for sympathy for others. These emotions correlated negatively with isolating behaviors, reinforcing the role of attachment and emotional regulation in the development of social skills. These results suggest important clinical implications, particularly in the design of early intervention programs.

The final study (Chapter V) delved deeper into the relationship between sympathy and respect, involving interviews with 53 children. Their conceptualizations and reasoning about respect were explored, as well as levels of sympathy (self-reported and parent-reported). The results indicated that sympathy was positively associated with pro-social definitions of respect, while

authority-based conceptualizations correlated with lower levels of sympathy. Sociodemographic variables that might influence this relationship were also analyzed.

These contributions point to the importance of attachment relationships in the emergence of moral emotions and pro-sociality in childhood, and in the associated relational and individual well-being, influencing social behaviors such as manifestations of respect related to these emotions. Thus, the development of interventions that promote these emotional competences from an early age, pointing to the need for more research with diversified samples and instruments that are even more suitable for pre-school ages.

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## Chapter I: Introduction

*“Morality is not properly the doctrine of how we may make ourselves happy, but how we may make ourselves worthy of happiness”*

(Immanuel Kant, 1788/2004. Critique of practical reason)

## **Introduction and theoretical contextualization.**

This dissertation seeks to address and elaborate on the early development of adaptive and healthy expressions of moral and kind emotions, whether oriented towards the other or towards oneself and marked by the child's moral understanding of what is right and wrong. Keeping a focus on the expression of sympathy, particularly, and its significant predictors such as secure attachment relationships and emotion regulation abilities and subsequently exploring the association of this specific emotion with more pro-social and respectful attitudes and behaviors (as well as the development of children's understanding of respect). Although it is not exactly a recent topic in the literature on socio-emotional development, it addresses concepts and emotions that are complex and challenging to define and distinguish theoretically, as well as difficult to measure, assess objectively, and as such to research empirically. As a result, despite the current growing interest in this topic, the number of peer-reviewed empirical studies dedicated to it is low (as evidenced by the few studies extracted in both the presented systematic reviews, i.e., Costa Martins et al., 2021a and Costa Martins et al, 2022 – Chapters II and III).

Moral and kind emotions include empathy, compassion, pity, but also sympathy (Eisenberg, 2018) and respect (Malti et al., 2020). The present work has chosen to focus on the last two – sympathy and respect – also seeking to promote a better understanding and distinction between these various listed concepts, which are easily mentioned in the literature in a condensed, compacted, and unspecified manner. The current introduction attempts a broad and comprehensive literature analysis on such challenging concepts and the theoretical context behind them.

The primary function of basic emotions (sadness, joy or fear) is linked to the individual's survival instinct (Izard, 2007). In contrast, moral emotions play an important role in human relationships and social interactions, as they typically emerge in such contexts. These emotions motivate individuals to respect and follow social (and even individual) moral norms and expectations (Goffman, 2005, Tracy et al., 2007), by regulating their feelings, thoughts, and behavior. These guide individuals to behave in morally and socially appropriate ways in their interaction with others (Tangney & Tracy, 2012). In essence, while regulated basic emotions ensure survival, regulated moral emotions promote healthy and adaptive social-emotional development, both crucial for individual well-being and growth.

Moral emotions are commonly categorized as either other-oriented or self-oriented (also referred to as other-conscious and self-conscious). Other-oriented moral emotions (contempt,

gratitude and sympathy) imply an evaluation of another individual and their actions. In contrast, self-oriented moral emotions, such as guilt and shame, emerge from the evaluation of one's own actions and their consequences for others (Tangney et al., 2007).

Prior to understanding moral other- or self-conscious emotions such as those listed and described above, one needs to start by studying what morality and moral development consist of. Jean Piaget established intelligence and moral judgment as developmental constructs, vulnerable to transformations characterized by stages that go hand in hand with the child's dynamic and ever-changing reality (Piaget, 1977). As a biologist, psychologist, and epistemologist, Piaget was the first to carefully approach moral development during childhood and youth. He defined this development as transformations occurring in the child's judgments regarding the acts they consider right or wrong. Piaget (1932) based this definition, and its three associated stages (pre-morality, heteronomous morality, and autonomous morality), on a symbolic game related to the transgression of moral rules, and on the child's understanding of these rules. In short, he observed in a clinical and experimental setting, throughout reports of children of various ages, whether a certain act, for them, corresponded to a transgression of the rules (a wrongful act), or on the contrary (a rightful act). Thus, in this first theorization of morality, there is a focus on a superior entity external to the child, endowed with authority, which determines the rules and is usually represented by the adult, or by other entities also linked to authority (e.g., religious institutions, legal systems).

Piaget (1932) also emphasized that a period of pre-morality, which precedes morality itself, lasts until the age of 4 to 5 years, during which the child has little or no understanding of the rules and is mainly regulated by their exterior. Only after this stage does morality begin to develop, first in an understanding based on morality imposed by others, and later, based on universal and internalized norms, in a more autonomous expression by the child/pre-adolescent.

Based on Piaget's theory, stages, and children's responses to moral dilemmas, Kohlberg described moral development further, with the corresponding stages of pre-conventional morality, conventional morality, and post-conventional morality. In this first stage of pre-conventional morality, the child only reasons in reference to themselves, and does not yet have an understanding or integration of social rules and expectations. At the second level, conventional morality, the child considers what conforms and respects the rules to be correct, but not exclusively. They also consider the expectations and conventions of society, hence its name – conventional morality. The third and final level, post-conventional morality, includes individuals who accept society's rules, solely because they have analyzed and accepted previously certain general moral principles

underlying them. If they find that one of the rules conflicts with one of their principles, they will be able to judge the situation based on the principle, rather than the conventional rules, hence the name, post-conventional. (Kohlberg, 1981, 1984). Authors of a more contemporary nature such as Turiel and Killen (2010) have expanded upon this more classical theoretical framework by integrating the role that certain emotions, such as respect, play in the context of the development of morality in children. Thus enabling the incorporation of the complexity and parallelisms between socio-emotional and moral development. Characterizing both developments as contingent to the child's socio-cultural and emotional environment, also highlighting the peer relationships involved.

The various studies presented throughout the subsequent chapters, when selecting the age for the participants, had these sensitive periods in mind (from 4 to 5 years old to adolescence). These include important phases for the moral and the cognitive development of the individual (Piaget, 1932, 1977), which will undergo interesting transformations that can be explored, as previously mentioned. And as such, these transformations are crucial for the study of the development of moral emotions such as sympathy and respect, as well (Eisenberg, 2000; Malti et al., 2020).

This current interest in emotions such as sympathy and guilt, is based on the understanding that moral emotions are a central, although often overlooked, domain of human morality that plays a significant role in individuals' (and groups') thoughts, feelings and behaviors (Tangney et al., 2011). By maintaining this focus, the present work is also strongly based on the notion that children's dynamics, achievements and developments take place in the context of their first and primary relationships. Specifically, their relationships with their main caregivers (attachment figures, Bowlby, 1969/1982; 1973; 1988), and consequently of their relationships with themselves, their peers and, eventually, the world around them.

The next sub-chapter seeks to contextualize how the development of kind and empathetic expressions such as sympathy, and even self-oriented feelings of guilt emerge and might be affected (or in contrast, are not affected) in the context of these primary relationships, which are so important for the first years of children's lives.

### **Kindness, sympathy, guilt, and its predictors: Attachment relationships.**

The historical and theoretical-clinical context that gave place to the extremely well-known attachment theory, prior to John Bowlby himself, can be analyzed. His clinical supervisor, Melanie

Klein (1957/1984), pointed out the importance of primary relationships for the development of the child's social skills. She argued that from an extraordinarily early age, children can feel satisfaction (not merely physical or nutritional, but emotional as well), and gratitude towards an original and primary "relational object" (usually being the mother, as the author named it). Such gratitude is intimately connected to kindness and is the foundation for appreciating the good in others. Internal enrichment derives from having assimilated a good "relational object", in such a way that the individual develops the ability to share the gifts of said object with others. Based on various theoretical frameworks, not only the psychoanalytical, but also the ethological and behavioral, Bowlby established that "to form a deep attachment to a person (or a place or a thing) is to take them as the terminate object of our instinctual responses" (Bowlby, 1959, pp. 13).

An attachment, according to Bowlby (1969/1982; 1973)'s pioneering work, is described as an individual's tendency to develop intense emotional ties with one or more primary caregivers (attachment figures), forming the individual's first emotional relationship (once again, usually with mothers) which will serve as a model for the child's future relationships. Depending on the response given by the attachment figure, attachment patterns and models of internal functioning develop, which will guide feelings, thoughts and expectations and thus influence the child's future relationships (Ainsworth & Bowlby, 1991). Considering such framework, the relational component of attachment is irrefutable. These bonds form the basis of the behavioral system of seeking physical closeness and security that continues throughout the individual's life (Bowlby, 1973). The author also added that attachment behaviors should be understood like any other form of behavior, whether simple or organized, and are differentiated by the search for, or preservation, of proximity to a differentiated and preferred individual.

When present, attachment security is associated with positive mental representations (working models, WM) of others and of our own self (Bartholomew & Horowitz, 1991; Bowlby, 1969/1982; Bretherton & Munholland, 2016), enabling a perception of others as deserving of sympathy and compelling us to care for them; allowing the individual to feel more confident about their own ability to handle another person's needs while effectively regulating their own emotions (Batson, 2010). These secure internal working models allow the child to feel safe and comfortable with others, allowing cognitive representations of the others, as singular individuals, and promotes consciousness of others (as someone with specific needs, and worthy of closeness and sympathy). When a child feels emotionally secure, and supported, they are less focused on their own needs and more available to respond to others. This emotional foundation fosters the capacity for caring,

positive and even reparative interactions that any child should be used to in the first place (Bartholomew & Horowitz, 1991; Batson, 2010; Cassidy et al., 2018).

It is important to note that these more internal emotional aspects are anchored and expressed in a relational and communicational context, common and applicable for both emotions studied here (sympathy and guilt). Previous studies showed that pre-school children (e.g., Rebelo et al., 2013 – Portuguese sample) with higher values of attachment security (referring to the children's attachment scripts), and thus, secure internal models, experience more affectionate relationships with their caregivers, in which it is possible to share and discuss emotional experiences in an open and supported way (as argued by Bowlby, 1982/1969; Bretherton et al., 1990). Such displays of affection and openness allow children to present greater emotional knowledge, adding that parents' emotional expressiveness and the explanation provides in conversations about their emotions and the child's emotions promote the development of emotional skills (Laible, 2011; Laible, & Thompson, 1998). Through their communication signals, and the caregiver's availability and responsiveness, children become able to co-construct their sense of trust and approach a larger social world in a secure way, and thus, become comfortable when seeking or offering help (Vaugh et al., 2019).

Empirically, a secure attachment during infancy and childhood was proven to nurture children's socioemotional development, fostering prosocial behaviors, more satisfying interactions and friendships (Bost et al., 1998; Costa Martins et al., 2021b; Fernandes et al, 2019a; Rose-Krasnor et al., 1996; Torres et al., 2008) and less aggressive attitudes (Fernandes et al, 2019b). When children grow up experiencing secure, sensitive and reciprocal attachment relationships with their preferred main caregivers, adequate and healthy levels of kind and moral emotions (e.g., sympathy, guilt, shame, respect) and of prosocial behaviors (e.g., helping, sharing with peers) have been expected, hypothesized and empirically proven (Shaver et al., 2016b; Costa Martins et al., 2021a; 2022).

In contrast, an insecure individual is likely to have a vulnerable and negative sense of self, and consequently a defensive posture towards others. At a theoretical level, these representations of self and of others are, in large part, what underlines the notion that security might prompt empathy and prosocial behavior, whereas insecurity might incite self-concern, self-protection, defensive rejection of others' needs, and mislead or sabotage efforts to understand and help others (Mikulincer & Shaver, 2016; Shaver et al., 2016a; Shaver et al., 2016b)

Fundamentally, since the beginning of its theorization, attachment relationships have been associated with children's social-emotional development outcomes, children's greater overall

well-being (e.g., Bowlby, 1969/1982; 1973; 1988). Since then, a few empirical studies have proven such associations, even giving emphasis to both mother and father attachments (e.g., Torres et al., 2008). Despite the link between attachment and moral emotions being somewhat neglected by literature, one can focus on them (both self or other-conscious emotions) as socio-emotional and moral outcomes, as well (similarly to previous studies referenced, regarding other socio-emotional outcomes).

Kind emotions are rooted in our conceptualization of kindness as a genuine feeling of deep concern for others (Malti, 2020; Schopenhauer, 1840/2006). Kindness results, in part, from the ability to establish an emotional connection with others and show compassion toward both oneself and others (Malti, 2020; Neff, 2011). This involves recognizing another person's painful experiences, feeling sympathy for them, and trying to repair any harm caused by oneself or others (Malti, 2020). Realizing one's own role in another's suffering evokes sadness and feelings of regret for one's wrongdoing (Malti, 2016, 2020). Essentially, being aware of others' needs and suffering allows individuals to perceive others as deserving of sympathy, or to even feel guilty when recognizing their own role in causing harm. Both sympathy and guilt can be considered as moral, kind emotions. However, they differ in consciousness orientation: sympathy is other-oriented, directed toward the other and their experience, whereas guilt is self-focused, concerned with the consequences of one's own actions and interactions (Malti, 2016; Malti et al., 2009).

Sympathy is initially described in developmental and socio-emotional literature as an affective reaction that emerges from the apprehension regarding another being's emotional state or condition, which is characterized by other-oriented feelings of concern (Eisenberg & Strayer, 1987; Wispé, 1986). For this reason, it is an emotion that in literature is associated with prosocial attitudes associated with more altruistic and helpful behaviors (Malti & Krettenauer, 2013). Its development is transversal to both boys and girls (Costa Martins et al., 2023) and is related to concepts such as empathy, compassion and pity and is easily mistaken for them (Eisenberg, 1988; Eisenberg et al., 2014; Miller & Eisenberg, 1988).

Guilt, in this context, should be understood from a developmental perspective rather than a clinical perspective. It is not seen as an excessive or unconscious need for punishment – as in neurotic guilt, depressive states, or moral masochism that reflects maladaptive developmental trajectories in children and adolescents (Coimbra de Matos, 2014; Oakley et al., 2012). Instead, it reflects the young individual's ability to develop the notion that they have made a transgression against another person, to feel remorse for that mistake, and to seek reparative resolutions (e.g., to help, to apologize). In principle, moral emotions serve an important adaptive function: they help

prevent moral and behavioral transgressions by discouraging or inhibiting hostile or conflictive tendencies; and by making children aware of the possible negative consequences of their actions for themselves and others (Malti, 2016). For example, studies show that the ability to feel sympathy - whether in anticipation of or in response to another's suffering - can inhibit a child's tendency to engage in aggressive or harmful behaviors (Zuffianò, et al., 2018).

When considering this adaptive value of moral emotions, one should emphasize the implied effect of emotion regulation. Basic emotions should be experienced within a present but tolerable range to preserve their own functionality to ensure the individual's survival and well-being. Likewise, moral emotions should also be felt, since its absence hinders the emergence of kind and pro-social interactions and intentions (e.g., to help, to make amends or correct mistake). However, felt in a non-dysregulated manner, to not contribute to emotional distress or cause suffering related to an intense form of such emotions, which is related to poor mental health and 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). Muris and Meesters (2013) observed that a predisposition to shame is linked to a prevalence of internalizing symptoms (i.e., anxiety, depression), while a lack of predisposition to feelings of guilt is related to externalizing symptoms (i.e., aggression, whether it be direct or indirect) (Tangney et al., 1996; 2007).

Moreover, sympathy and guilt have been physiologically linked to lower levels of not only aggression, but stress as well (Colasante et al., 2020; Colasante & Malti, 2016; Galarneau et al., 2021), and as previously emphasized, positively linked to prosocial and positive peers' interactions (Edwards et al., 2015; Grueneisen & Warneken, 2022). It is possible to understand that a predisposition to guilt has been related to interconnected constructive, adaptive, and "positive" emotions, cognitions, interactions and behaviors (Tangney et al., 1996), contributing to prosocial moral behavior, and consequently, to the quality of interpersonal relationships (Edwards et al., 2015; Grueneisen & Warneken, 2022; Olthof, 2012; Malti & Krettenauer, 2013). In essence, feelings of guilt seem to reduce the likelihood of violence in general (Arsenio et al., 2006), while also encouraging reparative behavior in children as young as 15 months (Zahn-Waxler et al., 1992).

However, the existing connection between these theoretical constructs (attachment, moral and kind emotions and pro-sociality), has been difficult to prove and find in empirical research, and therefore, hard to objectively uncover (Shaver et al. 2016a; Costa Martins et al., 2021a; 2022). It goes without saying that empirical findings are inconsistent and vary depending on diverse conceptualizations and measurements of sympathy and of quality of attachment (or even other

related constructs) (Eisenberg et al., 2006). Studies are scarce, and research that does find a positive link between attachment relations and moral emotions, finds links with feeble powers and feeble statistical significances. Even fewer, consider the important role of emotion regulation as a mediator (Costa Martins et al., 2021a), even though the mediating role of emotion regulation (in the association between attachment quality and empathy, and guilt) is previously reported in the literature (Panfile & Laible, 2012; Ştefan & Avram, 2018; Murphy et al. 2015). In essence, corresponding studies and a consistent model addressing sympathy, guilt (or even other moral emotions) are difficult to find. Only one study showed that insecure children had maladjusted levels of guilt (Muris & Meesters, 2014).

For further empirical contextualization, the present work presents two published systematic reviews that attempt to list the current findings on the impact that attachment security has, not only on the children's and adolescent's expression of moral and kind expression (Chapter II: Attachment and the development of moral emotions in children and adolescents: A systematic review), but also of prosocial behavior and interactions (Chapter III: Attachment and the development of prosocial behavior in children and adolescents: A systematic review).

To delve deeper into the beginning of the association between the two theoretical constructs discussed above (attachment and moral emotions such as sympathy and guilt), an empirical study was carried out, which is also presented below (Chapter IV: Attachment, sympathy, and the feeling of guilt: a longitudinal study), where 76 children participated on a longitudinal and developmental study, using direct observational measures. And by doing so, empirically translated what the literature and authors such as Thompson et al., (2003) have pointed out - that secure internal working models are associated with emotional and moral understanding, and with the children's self-architecture.

### **Sympathy and related prosocial outcomes: Respect.**

Much earlier than Piaget's moral development stages or Bowlby's attachment theory, the author that stands out the most when studying and making a theoretical conceptualization about respect, is the philosopher Immanuel Kant. It is in the Enlightenment period, where we can find Kant's theory of virtue, and most of the historical roots of contemporary discussions on the concept of respect for individuals. This author even contradicts previously prevailing practices and theories, which imposed respect for individuals based on their social position and individual merit

(Malti et al., 2020). Kant (2012/1785, 2004/1788), influenced by Rousseau, argued that all human beings have a dignity that is independent of their position in life or society, and merit. Furthermore, human beings have an ethical value without any basis in their social class or status (Birch, 1993).

People exist as “purposes in themselves”, of unconditional and incomparable value. From this philosophical perspective, everyone is considered to have an ethical value, in their own right. Equality, dignity, and moral rights are basic notions of respect. Respect is not something we choose to have or not, but something that, as human moral agents, we cannot help but feel (Malti et al., 2020). In this theory, Kant (2012/1785) argued that what is morally necessary is to act with due respect, not to have or cultivate a mere sense or feeling of respect, emphasizing its behavioral and relational domains. A clearer distinction between an emotional and behavioral dimension for respect can be built.

In a contemporary point of view, the primary characteristic of respect is its intentionality, as an attitude expressed by the imperativeness to respect, an attitude that manifests a virtue. Contemporary psychological literature most commonly still defines respect as the recognition of another’s good qualities or behaviors (Li & Fischer, 2007). Respect is inaugurated by language, that is, by using “respectful language” when we address the other. Speaking respectfully implies being careful with the words we utter in our relationships with others. Respect implies recognition, treating someone or something with attentiveness is equivalent to treating them with respect. It is in the attentive gaze that the importance of respect lies, attention equips the gaze with a moral significance. The more attention we devote, the better we orient ourselves (and the abler we are), to respect others as well (Esquirol, 2008).

In developmental and empirical terms, Bovet (1928) found that children conceived respect as a combination of fear and love for community role models and saw children’s feelings of respect as mainly unidirectional or unilateral in nature. That is, felt only in asymmetrical relationships (Kuryluk et al., 2011; Bovet, 1928). Piaget (1932) was the first to study respect from a developmental perspective and supported and amplified Bovet’s theory. Through observations of respect and its development from early to middle childhood, Piaget suggested that children first direct their respect towards authority figures (i.e. adults), at least in early childhood (during a predominance of a heteronomous morality). These adult role models were described as wise and as having a higher social status or the ability to exercise their authority. Taking these characteristics into account, children were expected to respect adults, otherwise they could be punished. Respect was thus rooted in the fear of punishment and was unilateral in nature at first (i.e. not reciprocal; children were expected to respect adults, but not the other way around). When later, regarding

bilateral respect, one can consider feelings of respect rooted in principles of justice and an understanding of the golden rule (i.e. to treat others as we wish to be treated). Piaget hypothesized that this form of reciprocal respect emerged in middle childhood, through relationships with peers, advances in socio-cognitive skills (e.g., perspective-taking) and the development of autonomy (Malti et al., 2020; Piaget 1932).

This way, respect and sympathy are prerequisites in all our interpersonal experiences and are an integral part of everyday life. In developmental literature, respect is defined as a positive emotion of esteem for a person's quality as a human being or for the "good" and ethical qualities of others, which are considered important (Malti et al., 2020).

Considering that respect is a human virtue that manifests itself early (e.g., Malti et al., 2020 showed that at just 5 years of age, children have behaviors oriented towards others, e.g., helping, comforting, or sharing and genuine expressions of respect), there are links between respect and other emotions (for these authors, sympathy is regarded as the prototypical emotion of kindness, and based on respect). Sympathy can indeed be an important emotion for encouraging children to think of respect in terms of pro-sociality, and to pay attention to the pro-social actions of others, because it guides one to consider the well-being of others (Eisenberg, 2000 and Malti et al., 2016). Respect and sympathy are thus other-oriented emotions (Malti & Latzko, 2017; Malti et al., 2020) and can both be considered constructs attached to the moral, social, and personal development of the individual, parts of our internal world, and of our relationships.

Both sympathy and sadness for wrongdoing are considered prototypical emotions of kindness in that they reflect an internalized ethical principle of justice or omission of harm; kindness and concern for another person's well-being; or both (Malti et al., 2020). Emotions play a major role in our evaluative and moral experiences. The moral response, in other words, works along a continuum from empathy, to sympathy, to compassion. By feeling "as the other feels", the inclination is to act kindly or positively towards others. Empathy, sympathy, and compassion for others become for us an object of our own moral attention, our own moral concern, and our own moral action. Sympathy and compassion are not necessary for respectful interaction, but the underlying empathic structure is necessary for the recognition of another free and conscious agent or agency, beyond the self (Drummond, 2006).

This final framework strongly inspired the last, but not least significant chapter of the current dissertation – "Chapter V: Respect and sympathy in Portuguese preschoolers and middle-school children", where this subject is explored theoretically, but also through the light of an

empirical study, and empirical evidence, through children's very own perspectives and narratives on such complicated words – sympathy and respect.

Finally, to summarize, the present work starts by synthesizing the most recent empirical studies around attachment relationships and socio-emotional outcomes (first in Chapter II, regarding moral emotions, and second in Chapter III, regarding pro-sociality and prosocial behaviors). With this foundation built, now conscious of previous results, limitations and gaps, an empirical and longitudinal study is presented (Chapter VI), where potential evidence of the impact of attachment security (as narrated by the children themselves) on moral emotions such as sympathy and guilt, during a sensitive time for the emergency of morality (4 to 5 years old), was tested. Lastly, to explore further and ahead, to see how these emotions impact how children developed pro-social interactions with others, a last empirical cross-sectional study (Chapter V) tests the hypothesis of an association between sympathy and children's conceptualization of ethical respect (pre-school and middle school children). One can consider the current work one that is dedicated to the importance of early attachment relationships, and a journey through a very overlooked and usually unselected and unspecified emotion – sympathy – and its very own predictors and outcomes. And a healthy, adaptive, singular outlook on an important emotion for our very own development, guilt.

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## Chapter II: Attachment and the Development of Moral Emotions in Children and Adolescents: A Systematic Review

Chapter based on:

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### Abstract

In recent years, the development of social and moral emotions (often associated with prosocial behaviors) has become the subject of increased research interest. However, the relation between these emotions and attachment is less studied. The present systematic literature review (PROSPERO: CRD42021247210) was designed to synthesize current empirical contributions that explore the link between attachment and the development of moral emotions (e.g., empathy, sympathy, altruism, and guilt) during childhood and adolescence. Article exclusion criteria included: studies with participants not living in natural contexts (e.g., institutionalized); studies on mental illness; qualitative research; research that does not reliably evaluate attachment or moral emotions; research on intervention programs; and non-peer-reviewed articles. Only 10 studies were found eligible. Results highlight a present focus on empathy and guilt and gaps regarding sympathy and altruism. The mediator role and positive effect of emotion regulation was noted. Significant positive correlations between attachment security and guilt, shame and forgiveness were emphasized. Limitations of the eligible studies included: representativeness of the participants; causality of the results; and the validity and significance of the instruments (e.g., lack of results reported by various parties involved). The present review aims to contribute to the understanding of an empathic, healthy development, in contrast to the alienation and bullying affecting the youth's emotional, relational, and academic lives.

**Keywords:** attachment; social-emotional development; moral emotions; empathy; guilt.

*“Attachment theory helps us understand how early caregiving fosters not only security but also the capacity for sympathy and compassion.”*

Jeremy Holmes (2001, *The Search for the Secure Base*)

## **Introduction**

Secure base relations are fundamental for socioemotional development (Ainsworth et al., 1978; Bowlby, 1980; Cassidy, 1994; Main, 1996). Children who experience consistent and sensitive caregiving develop internal secure working models of the self and of relationships that will guide different aspects of social development, such as emotion regulation or social competence (Kestenbaum et al., 1989; Panfile & Laible, 2012; Roque et al., 2013). For example, the internal working model will shape the child’s perception of emotional expression adequacy, that is, the expression effectiveness in eliciting sensitive responses from others to child’s needs (Cassidy, 1994). These internal working models can also be manifested in differences in the individuals’ emotional and behavioral responses to others’ distress (Cozolino, 2006), guiding prosocial development and empathic responses. Previous research showed a relation between moral emotions, specifically greater empathy, sympathy, guilt, and more prosocial behavior. Moral emotions can be considered as one of the foundations for prosocial behaviors and necessary for their emergence (Muris et al., 2014; Ongley & Malti, 2014). Similar results were found in adolescence, with attachment security being associated with greater empathy and greater vagal tone (which, in turn, is associated with greater emotion regulation skills involved in social behaviors, Beffara et al., 2016), the latter during maternal interactions (Diamond et al., 2012).

Despite the vast empirical support for the association between attachment and social development (Kestenbaum et al., 1989; van der Mark et al., 2002), less is known about the relations between attachment and the development of moral emotions.

Most studies focus on other aspects of family functioning and the child–parent relationship (e.g., parental support [Paez & Rovella, 2019]; positive parenting [Padilla-Walker & Christensen, 2010]; parental warmth [Xiao et al., 2018]) even though significant effects have been found when attachment is studied along with these dimensions (van der Mark et al., 2002).

### **Empathy, Sympathy and Prosocial Behavior**

Moral emotions can guide behavior or be an anticipation as a result of an evaluation of behavioral alternatives (Baumeister et al., 1995; Hoffman, 2007; van der Mark et al., 2002), reflecting previous emotional experiences as well as expectations. These emotions have an important adaptive function and might prevent moral or conduct transgressions by making the child aware of possible negative consequences for themselves and others (Zahn-Waxler et al., 1992). For example, the child's ability to feel sympathy in anticipation of or in response to another's suffering might inhibit the child's engagement in aggressive actions that would harm others (Tangney et al., 2007, Zuffianò et al., 2018).

Sympathy is defined as a feeling of concern for others that often, though not always, arises from a shared emotional state or experience of distress. It derives from the cognitive awareness of another's emotional or physical condition (Eisenberg, 2018; Eisenberg et al., 2014), directing attention to the potential consequences of one's actions – particularly regarding rights or well-being of others - and is conceptually related to more costly forms of altruistic prosocial behavior (Davis, 1980). Despite the conceptualization of sympathy as a protective factor, researchers often use empathy-related response measurements that do not differentiate sympathy from empathy and personal distress (Eisenberg, 2018; Malti et al., 2018). Sympathy can develop from empathy; however, it is important that there is a distinction between the two concepts (Eisenberg, 2018).

Empathy is a fundamental component of social competence and a known precursor to moral reasoning. It is conceptualized as the ability to accurately perceive and respond to another person's feelings, emotions and affective states (van IJzendoorn, 1997; Zuffianò, et al., 2018). Therefore, it is plausible to presume that empathy plays an essential and critical role in close relationships by promoting mutual understanding and sensitivity (Britton, 2005; Mehrabian et al., 1988). Positive social emotions, such as empathy, concern for others, compassion, or sympathy, have behavioral and social implications by promoting helping or sharing behaviors and inhibiting aggressive actions, all of which can improve the quality of relationships (Davis, 1980; Davis & Oathout, 1987; Eisenberg & Miller, 1987; Hoffman, 1990).

### **Guilt and Reparative Behavior in Relationships**

The self-conscious emotion of guilt refers to a feeling of tension, remorse, and regret over inappropriate behavior in the presence of other people. Both guilt and shame have been defined as prototypical moral emotions that guide compensatory behaviors in cases of condemnable social actions committed by oneself (Miller & Eisenberg, 1988). Similarly to empathy and sympathy, guilt

and shame are often used interchangeably in literature, and it is crucial to distinguish between both concepts (Tangney & Tracy, 2012). Guilt results from a negative evaluation of a specific behavior (“I did that wrong”), whereas shame involves a negative evaluation of the global self (“I did/was wrong”). This implies that guilt involves feelings of regret and remorse, along with a desire to have behaved differently in order to prevent or undo the harm caused (Lewis, 1971). These differences are also manifested in the functionality of both emotions, since guilt motivates reparative behavior (i.e., making apologies and engaging in attempts to fix the situation), while shame motivates a more defensive, avoidant, and submissive behavior (Tracy & Robins, 2004).

Guilt is generally described as having an adaptive value, although the dysregulation of this emotion has been associated with several psychopathological symptoms. High levels of self-conscious emotion might be maladaptive, for example, when guilt is experienced in an obsessive, ruminative way or fused with feelings of shame (Gilbert, 1997). On the other hand, it has been argued that guilt can also promote socially reparative behaviors after transgressions, playing an important role in the development of empathy and conscience (Paez & Rovella, 2019; Tangney, 1991). This last formulation of guilt will be considered in this work, since there is increasing evidence showing that socially problematic behaviors (such as aggressive ones) are associated with lower levels of guilt (e.g., Stuewig, et al., 2010; Tangney et al., 1996).

Moral emotions might be rooted in early affective experiences with attachment figures (e.g., De Wall et al., 2016; Malti, 2016). Studies on empathy and prosocial development have largely progressed in parallel with the flourishing research on attachment, and clear points of intersection have been identified (Waters et al., 1991; Waters et al., 1986; Zuffianò, et al., 2017).

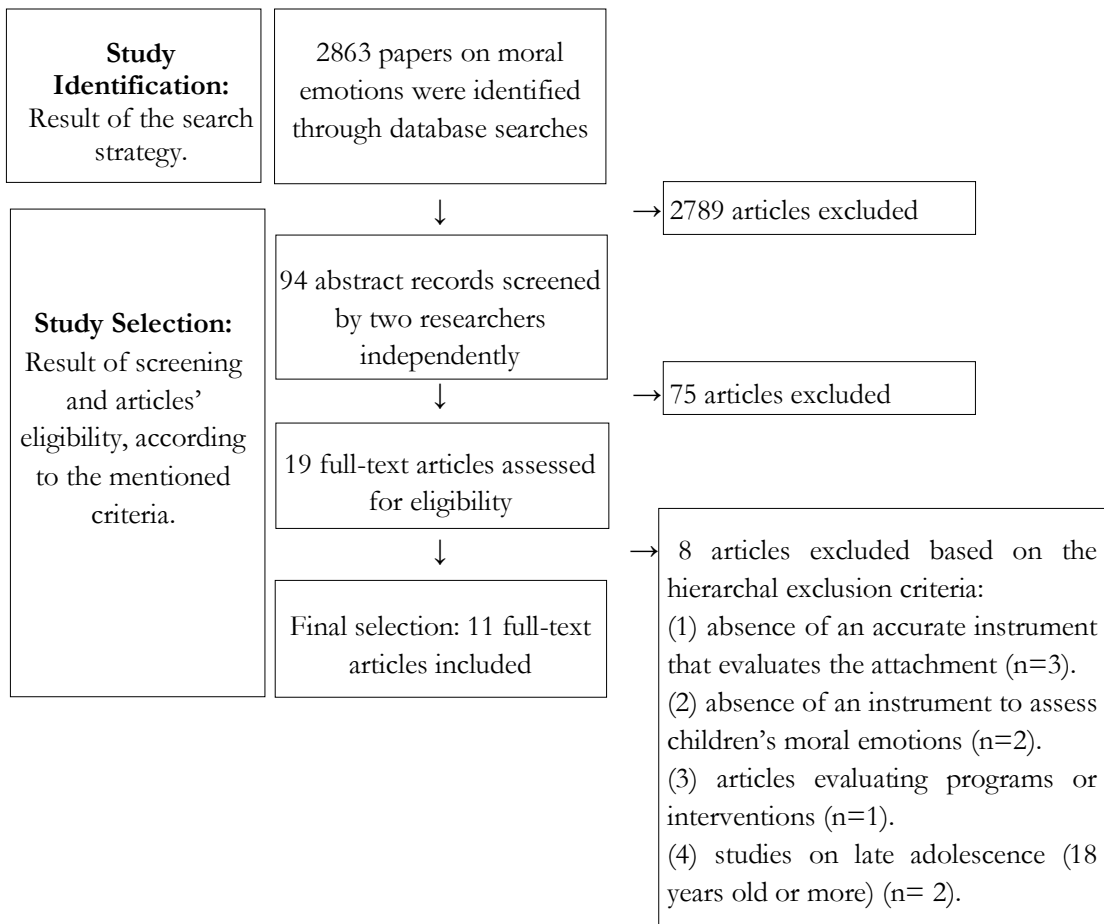
The present systematic literature review aims to explore and synthesize the relation between attachment and moral emotions (e.g., empathy, sympathy, altruism, and guilt) during childhood and adolescence, while answering the following question: How does attachment relates to empathic, social and moral emotions in preschoolers, middle school children and adolescents? Is quality of attachment related to empathy (and other moral emotions such as sympathy, altruism, and guilt)? Is that effect indirect or mediated through other important variables (e.g., emotion regulation, Panfile & Laible, 2012)? Although this is a relatively recent field of interest, it is essential for understanding how to support healthier, more empathic, sympathetic and prosocial development of children’s emotional lives. This is particularly relevant, in light of increasing alienation and bullying (Gomes et al., 2020) and their impact on children’s relational, emotional and academic wellbeing.

## Materials and Methods

This review follows the general guidelines presented in Preferred Reporting for Systematic Reviews (PRISMA, Page et al., 2020) to analyze the relation between attachment and moral emotions (specifically: empathy, sympathy, guilt, and altruism).

Prior to data extraction, this review protocol was registered on the International Prospective Register of Systematic Reviews (PROSPERO; registration number: CRD42021247210). The identification, screening and eligibility verifying process is synthesized in Figure 1, and each of these steps will be detailed next.

Figure 1. Flowchart of the study identification and selection process (according to the PRISMA guidelines, Page et al., 2020).



### Search Strategy and Article Eligibility Criteria

First, articles' titles were screened, duplicates were removed, and relevant studies were selected and exported. For this purpose, a set of inclusion and exclusion criteria were established

for article selection (Table 1). For abstract screening, the following inclusion criteria were established a priori: (1) empirical articles with available abstract published in peer-review journals; (2) articles published in Portuguese, English, French or Spanish (languages mastered by the authors); and (3) articles examining the relationship between attachment and moral emotions (i.e., sympathy, empathy, guilt, or altruism). For the remaining articles, abstracts were screened by the main researcher and two other independent reviewers to assess whether the paper met the eligibility criteria; those that did not were excluded. If the information required to determine eligibility was not available from the title and abstract, the full text was screened.

*Table 1. Summary of inclusion and exclusion criteria*

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>• Empirical articles with available abstract published in peer-review journals;</li> <li>• Articles published in Portuguese, English, French, Spanish or Italian (languages mastered by the authors);</li> <li>• Articles examining the relationship between attachment and moral emotions and pro-sociality (e.g., sympathy and guilt, altruism);</li> <li>• Articles with the following participants: Children and adolescents (0-18 years old).</li> </ul>	<ul style="list-style-type: none"> <li>• Studies on children or adolescents not living in natural contexts (e.g., institutionalized children);</li> <li>• Studies of moral emotions in the context of mental illness or addictive substance usage;</li> <li>• Qualitative research;</li> <li>• Research that does not accurately/directly evaluate attachment or moral emotions.</li> <li>• Research on intervention programs;</li> <li>• Non-peer-reviewed articles (e.g., book chapters, conference papers or posters).</li> </ul>

Exclusion was established a posteriori (Table 1): (1) children or adolescents not living in natural contexts (e.g., institutionalized children); (2) studies of moral emotions in the context of mental illness or addictive substance usage; (3) intervention programs; (4) articles aiming to develop, adapt or validate measures of moral emotions; (5) studies with a qualitative design; and (6) non-peer-reviewed articles (e.g., book chapters, conference papers or posters and studies measuring attachment that did not follow Bowlby's (1980, 1982) or Ainsworth and colleagues' (1978) conceptualization of the construct). In terms of the selection process, articles that related attachment to pro-sociality were included, and a chance was given to include articles that addressed its opposite: bullying.

Three reviewers were involved in data extraction. Disagreements and discrepancies were discussed until consensus was reached. If consensus was not achieved, another(s) reviewer(s) were consulted.

Studies that looked at empathy and moral emotions in particular cases of psychopathology such as psychopathy and autism were excluded. Other common issues related to empathy such as morality (e.g., McAuliffe, 2019), therapeutic interventions [e.g., Feder & Diamond, 2016), politics and social issues such as racism [e.g., Rious & Cunningham, 2015) and care workers' well-fare and empathy [e.g., Ardenghi et al., 2020) were also excluded.

This systematic data search was performed in EBSCO's databases (e.g., PsycINFO, Psychology and Behavioral Sciences Collection) using the following search terms (combined with Boolean terms): attachment AND (moral emotions OR empathy OR sympathy OR guilt OR altruism). The combination of these terms was searched in the title, abstract and keywords. The search was applied to the last 30 years (until 15 July 2021) and resulted in 2856 records. To this number, 7 other articles of interest were identified through cross-referencing, making a total of 2863 articles screened (Figure 1).

### **Study Selection Procedures**

The initial 2863 articles were screened according to the established inclusion criteria by the first author and 2789 articles were excluded at this stage. The remaining 94 articles were screened by the first and second author to assess eligibility for inclusion according to the criteria listed above, and 19 full-texts were further assessed independently by the first 2 authors for inclusion. Discrepancies were resolved by consensus. After full-text review by the first 2 authors, 10 articles (see Appendix A) met all the inclusion criteria (Figure 1).

### **Data Extraction Procedures**

A categorization system was developed to collate and summarize the results. The categorization system was developed to identify: (1) general characteristics of the studies, for example, country of origin, theoretical background (Table 2); (2) general characteristics of the participants, for example, ethnicity, socioeconomic background, age range (Table 2); and (3) assessments of moral emotions, e.g., sympathy, guilt (Table 2). The classification of the retrieved articles was performed by the first two authors. Discrepancies were discussed until consensus was reached.

Table 2. General characteristics of the selected articles.

Characteristics of the studies	Total of articles (n)	Percentage (%)	Articles ID <sup>a</sup>
<i>Theoretical background:</i>			
• Developmental psychology (socio-emotional development)	10	100%	1 – 10.
<i>Type of data:</i>			
• Original	10	100%	1 – 10.
• Secondary	0	0%	-
<i>Study design<sup>b</sup></i>			
• Longitudinal	4	40%	1, 2, 9, 10.
• Cross-sectional	6	60%	3, 4, 5, 6, 7, 9.
<i>Assessment of moral emotions</i>			
• Child / adolescent-reported	7	63.64%	1, 3, 4, 5, 6, 8, 9.
• Parent-reported	2	18.18%	1, 7.
• Observation	2	18.18%	2, 10.
<i>Assessment of Attachment</i>			
• Child /adolescent -reported	7	63.64%	1, 3, 4, 5, 6, 8, 9.
• Parent-reported	2	18.18%	2, 7.
• Observation	2	18.18%	2, 10.
Sample characteristics	(n) <sup>b</sup>	(%)	ID <sup>a</sup>
<i>Country of origin</i>			
• Anglo-Saxon countries	7	63.64%	1, 2, 3, 4, 5, 7, 9.
• European countries	3	27.27%	4, 8, 10.
• South American countries	1	18.18%	6.
<i>Age</i>			
• Child	5	45.45%	2, 4, 7, 8, 10.
• Adolescent	6	54.55%	1, 3, 4, 5, 6,

<i>Social economic status</i>			
• High/Median	6	50%	1, 2, 4, 8, 9, 10.
• Low	2	16.67%	1,4.
• Not mentioned	4	33,33%	3, 5, 6, 7.
Characteristics of the assessment of moral emotions	(n) <sup>b</sup>	%	ID <sup>a</sup>
• <i>Empathy</i>	9	69.23%	1, 2, 3, 5, 6, 7, 8, 9, 10.
• <i>Sympathy</i>	0	0%	-
• <i>Guilt</i>	2	15.38%	4, 5.
• <i>Altruism</i>	0	0%	-
<i>Others moral emotions:</i>			
• <i>Forgiveness</i>	1	7.69%	5.
• <i>Shame</i>	1	7.69%	4.

a. Articles' references are presented in the Appendix A.

b. According to inclusion criteria of the current review, only the quantitative results of studies with mixed methods were included.

## Results

### General Description of the Studies: Theoretical and Empirical Perspectives

All selected articles used as theoretical background developmental psychology theories, such as attachment theory and social-emotional development, and referenced the main founders of these theories. Only studies with original data were selected (Table 2). Four studies used a longitudinal design (40%). Most studies used child-reported measures while a minority used observational measures. This was true for both the moral emotion measures (child-reported: 63.64%) and the attachment measures (child-reported: 63.64%), (Table 2).

### General Characteristics of the Sample and Assessments

Most of the studies were conducted in Anglo-Saxon countries (United States of America - 63.64%). Studies in childhood and adolescence proved to be evenly distributed (45.45% and

54.55%, respectively). Most of the samples revealed a majority of medium-high economic status participants (50%), (Table 2).

Within this theoretical context, the most studied moral emotion was empathy (69.23%), followed by guilt (15.38%), forgiveness (7.69%) and shame (7.69%) (Table 2). No studies were found regarding the potential link suggested by literature between attachment and sympathy or altruism.

Further individual assessment of participants and instruments for the selected articles are presented in Table 3:

*Table 3. Summary of samples dimensions, participants age and ethnicity, and studies' instruments for the selected articles.*

ID. Authors (Date)	N	M age (SD)	Ethnicity	Attachment measure	Moral Emotion measures
1. Diamond et al. (2012)	103 dyads	NA (14 years old)	82% Caucasian, 3% African American, 1% Asian, 7% Latino, 7% another or mixed ethnicity.	Adolescent Attachment Scale (Miller and Hoicowitz's 2004)	Empathy: During the re-viewing of their discussion task, participants rated positive and negative affect (5-point scale, Diamond et al., 2021).
2. Kim & Kochanska (2017) – Family study.	101 families	NA	-	Strange Situation and Attachment Q- Set version 3.0 (Waters & Deane, 1985).	Empathy: Paradigm (Kochanska et al., 2010).
3. Laible (2007)	117	19.6 years (1.41).	78% Caucasians	Inventory of Parent and Peer Attachment (IPPA, Armsden & Greenberg, 1987).	Empathy: Interpersonal Reactivity Index (IRI, Davis, 1980).
4a Muris et al. (2014) – Study 1	688	10.39 (1.00)	Majority: European descent (i.e, Dutch).	The Attachment Questionnaire for Children (Muris et al. 2000)	Guilt and shame: SCEMAS (Stegge and Ferguson, 1994)
4b. Muris et al. (2014) – Study 2	135	15.46 (1.99)	Less than 10% were non- Caucasian	IPPA (Armsden & Greenberg, 1987).	Guilt and shame: SCEMAS (Stegge & Ferguson, 1994)

5. Murphy et al. (2015).	148	15.68 (1.16)	88.5% Caucasian, 5.4% Hispanic, 5.4% others	Shortened version of IPPA; Armsden & Greenberg, 1987).	Empathy: IRI (Davis, 1980).
6. Paez & Rovella (2019)	518	15.22 (1.69)	-	Kerns Security Scale (Argentinian adaptation: Richaud et al., 2001).	Empathy: Interpersonal Reactivity Index (Argentinian adaptation, Paez et al., 2008).
7. Panfile & Laible (2012)	63 dyads	NA (3 months of age)	81% Caucasian.	Attachment Q-Set version 3.0 (Waters & Deane, 1985).	Empathy: My Child questionnaire (Kochanska et al., 1994) and Bryant's (1982) Index of Empathy.
8. Ştefan & Avram (2018).	212	56.34, months (11.52)	92.8% Caucasian, 0.5% Gypsy, and 6.7% reported no ethnicity.	Attachment Security Completion Task (Bretherton et al., 1990)	Kid's Empathic Development Scale (KEDS; Reid et al., 2013).
9. Stern et al. (2021).	184	14.27 (0.77) to 18.38 (1.04)	58% Caucasian, 29% African American, 13% other	The Adolescent Attachment Interview and Q-set (George, Kaplan & Main, 1996 and Kobak et al., 1993).	Empathy: Observed supportive behavior task (SBT).
10. van der Mark (2002)	151	16–21 months	Mostly Caucasian	Strange situation	Empathy: observation coding system (Zahn- Waxler et al., 1992)

### Findings on the Different Influences between Attachment and Moral Emotions

The results regarding infancy showed that from 16 to 22 months, empathic concern for mothers' distress increased, whereas empathy for strangers decreased. A more fearful temperament and less attachment security predicted less empathic concern for stranger's distress (van der Mark et al., 2002).

Among the 10 articles selected, Murphy et al. (2015) study presented positive correlations between attachment and emotion regulation ( $r = .30, p < .01$ ) and also empathy ( $r = .17, p < .05$ ), guilt ( $r = .26, p < .01$ ) and forgiveness ( $r = .33, p < .01$ ). In Muris et al. (2014) study there were significant

differences in the children's shame ( $F = 7.92$ ,  $p < .001$ ) across different attachment styles but not in guilt ( $F = 2.11$ ,  $p = .12$ ); the avoidant style had higher levels of shame.

It was also possible to identify five pathways of analysis and significant mediation models (Diamond et al., 2012; Kim, Kochanska, 2017; Panfile & Laible, 2012; Ştefan & Avram, 2018; Stern et al., 2021) These models, in summary, revealed that the quality of attachment had a positive and significant association with empathy, and that empathy was a significant mediator of the indirect effect between maternal attachment and prosocial behavior (Kim & Kochanska, 2017). Emotion regulation was a significant mediator of the effect of attachment on empathy levels, revealing that more secure children were rated higher in emotion regulation and, consequently, higher in empathy (Panfile & Laible, 2012). Children with below-average emotion regulation strategies showed a larger effect of attachment security on empathy, while children with above-average emotion regulation strategies and attachment security were the most empathic (Ştefan & Avram, 2018).

Secure attachment at 14 years of age predicted teens' greater capacity to provide empathic support during observed interactions with friends across ages 16 to 18. Less secure teens were slower to develop these skills. Furthermore, teens' attachment security predicted the degree to which friends called for their support, which was associated with teens' responsiveness to such calls (Stern et al., 2021). In addition, during adolescence, the highest levels of empathic sensitivity were found among youths with low attachment anxiety and high emotion regulation, whereas the lowest levels of empathic sensitivity were found among participants with high attachment anxiety and high emotion regulation, suggesting that the ability for emotion regulation might only facilitate empathic sensitivity among teens with low attachment anxiety (Diamond et al., 2012).

Secure girls perceived a higher acceptance rate in the relationship with their parents (mothers:  $p < .001$ ; fathers:  $p < .001$ ), showed higher empathy (mothers:  $p < .05$ ; fathers:  $p < .05$ ) and obtained higher scores in perspective taking (mothers:  $p < .001$ ; fathers:  $p < .01$ ) and empathic concern (mothers:  $p < .05$ ; fathers:  $p < .05$ ) (Paez & Rovella, 2019).

Parent attachment had no direct links with social behavior. Instead, the link between parent attachment and social behavior was indirect, mediated by aspects of emotional competence (not only empathy but emotional awareness and positive expressiveness) (Laible, 2007).

## Discussion

The present systematic review found several studies relating attachment to prosocial behavior and on the relation between moral emotions and prosocial behavior (symbolized here by the high number of articles found by EBSCO: 2863). However, the number is considerably lower (more specifically, 10), when addressing attachment and moral emotions and when instruments that reliably assess these variables are taken into account.

Regarding the 10 eligible articles, some limitations were found. The participants were mostly Caucasian and of medium-high socioeconomic status (Stefan & Avram, 2018; Stern et al., 2021). The research designs were mostly correlational and cross-sectional and did not allow us to verify a causal relationship between variables (Kim & Kochanska, 2017; Muris, et al., 2014). The same problem was found associated with path analysis, this being a correlational statistical analysis in nature (Kim & Kochanska, 2017).

The absence of genetic considerations regarding the empathic ability of both the parents and the children/adolescents was stressed. The lack of consideration for the effect of empathy-promoting interventions on children and adolescents was also pointed out (Stern et al., 2021). Paez and Rovella (2019), Murphy et al. (2015) and, Muris et al. (2014) identified self-reported measures as a major limitation, as well as the lack of comparison with significant adult reports. Additionally, no study has addressed the possible differences between attachment to mothers and attachment to fathers for the development of moral emotions relying predominantly on maternal reports (e.g., Panfile & Laible, 2012). It is argued overall in these articles that using all types of instruments, assessments and reports of both children and parents will promote more meaningful and significant results (Stefan & Avram, 2018). Finally, in contrast, studies such as that of Diamond et al. (2012) report as a limitation the lack of objectivity of their selected observational measures.

It is worth noting the significant gap found in literature: the absence of studies relating attachment to the development of social-moral emotions such as sympathy and altruism (as seen in Table 2). This gap is particularly interesting when taken into consideration the substantial number of published articles exploring the relations between prosocial behaviors and moral emotions (see also: Malti, 2016; Malti et al., 2013; Malti et al., 2016); this could be related with the above-mentioned difficulty in conceptually distinguishing the concepts of sympathy and empathy (i.e., the lack of instruments that accurately differentiate both variables).

Our results reveal a small number of longitudinal studies, which is surprising, considering the predominant developmental theoretical context of the selected studies, there was also a predominant use of self-reported measures (and not reported by parents, teachers or observational measures). No specific differences were found in the predominance of research on children or adolescents, both being equally rare. The present systematic review reveals a consistent link between moral emotions and attachment (Murphy et al., 2015; Muris et al. 2015); particularly notable are the different models relating to empathy and attachment that have been found in our selected studies. In these models, the mediating role of empathy between attachment and the prosociality of the developing individual can be registered (Kim & Kochanska, 2017). Crucial as well is the positive mediating role of emotion regulation in the relationship between empathy and attachment. An opposite effect was found for negative emotions from the child since attachment security did not correlate positively with this type of expressiveness on the part of the child (Panfile & Laible, 2012). These rare but highly informative and significant studies substantiate the need for continuing and deepening the study of these domains.

In the search process, preference was given to the following moral emotions: empathy, sympathy, guilt, and altruism. A limitation that can be pointed out to this approach is the absence of other emotions considered moral and social, such as regret, compassion, shame, and forgiveness. Although some of these emotions were found in the selected studies (e.g., Muris et al., 2014), the absence of these emotions in the Boolean terms may have prevented the selection of other articles. Furthermore, as a potential consequence, a small number of eligible articles were found (ten), making interpretations of the results and associations between the different studies difficult. For this same reason, and since these are the main articles to delve into this research topic, it was not possible to compare and explore how the different measures relate to moral emotions, considering the number of studies with parent's reports instruments and observational methodologies was significantly low (two). Will these differing measures relate to empathy or guilt in similar ways or reveal differing conclusions and point out different research issues? These shortcomings provide an opportunity for future systematic reviews to also address others moral emotions (e.g., embarrassment).

Additionally, the elected studies devoted limited attention to other contributors to these emotions (e.g., sociodemographic variables such as gender, family configuration and exposure to others) and to children's characteristics and abilities known to support the development of moral emotions, such as the ability to appropriately attribute mental states and emotions to themselves and others, or theory of mind (ToM), previously associated in the literature to empathy (Brown, et

al., 2017) and guilt (Plousia, 2018). How attachment and moral emotions relate and vary in their association with different variables is not covered in depth. There is also potential to address these gaps in future investigations.

To conclude, it is important to point out that the 10 articles and 11 studies proved to be coherent among themselves, despite differing methodologies, qualities, and weights of results. Moreover, they supported what has been theoretically argued—the relationship between attachment and the socioemotional development of children and adolescents (more specifically, moral emotions). Securely attached children and teenagers demonstrate a greater ability to adequately express empathy and feelings such as guilt, forgiveness, and shame.

Although only 10 studies addressed the association between attachment and moral emotions, we think it is an important and promising field of research. Understanding how these early relationships are related to the development of moral emotions might help to improve more tolerant and pro-social (and to decrease anti-social) behaviors in children, impacting their emotional, relational, and academic lives.

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## Appendix A. The List of articles that made it through the selection process.

1. Diamond, L. M., Fagundes, C. P., & Butterworth, M. R. (2012). Attachment style, vagal tone, and empathy during mother–adolescent interactions. *Journal of Research on Adolescence*, 22(1), 165–184. <https://doi.org/10.1111/j.1532-7795.2011.00762.x>
2. Kim, S., & Kochanska, G. (2017). Relational antecedents and social implications of the emotion of empathy: evidence from three studies. *Emotion*, 17(6), 981–992. <http://dx.doi.org/10.1037/emo0000297>
3. Laible, D. (2007). Attachment with parents and peers in late adolescence: Links with emotional competence and social behavior. *Personality and Individual Differences*, 43, 1185–1197. <http://dx.doi.org/10.1016/j.paid.2007.03.010>
4. Muris, P., Meesters, C., Cima, M., Verhagen, M., Brochard, N., Sanders, A., Kempener, C., Beurskens, J., & Meesters, V. (2014). Bound to feel bad about oneself: relations between attachment and the self-conscious emotions of guilt and shame in children and adolescents. *Journal of Child and Family Studies*, 23, 1278–1288. <https://doi.org/10.1007/s10826-013-9817-z>
5. Murphy, P., Laible, D.J., Augustine, M., & Robeson, L. (2015). Attachment’s links with adolescents’ social emotions: The roles of negative emotionality and emotion regulation. *The Journal of Genetic Psychology*, 176(5), 315–329. ISSN: 0022-1325 print / 1940-0896 online. <https://doi.org/10.1080/00221325.2015.1072082>
6. Paez, A., & Rovella, A. (2019). Vínculo de apego, estilos parentales y empatía en adolescentes [Attachment bond, parenting styles, and empathy in adolescents]. *Interdisciplinaria*, 36(2), 23–38. <https://doi.org/10.16888/interd.2019.36.2.2>
7. Panfile, T., & Laible, D. (2012). Attachment security and child’s empathy: the mediating role of emotion regulation. *Merrill-Palmer Quarterly*, 58(1), 1-21. <http://www.jstor.org/stable/23098060>
8. Stefan, C. A, & Avram, J. (2018). The multifaceted role of attachment during preschool: moderator of its indirect effect on empathy through emotion regulation. *Early Child Development and Care*, 188(1), 62-76. <https://doi.org/10.1080/03004430.2016.1246447>

9. Stern, J., Costello, M., Kansky, J., Fowler, C., Loeb, E. M, & Allen, J. P. (2021). Here for you: Attachment and the growth of empathic support for friends in adolescence. *Child Development*, 0(0), 1-16. ISSN: 0009-3920 Online ISSN: 1467-8624. <https://doi.org/10.1111/cdev.13630>
10. van der Mark, I., van IJzendoorn, M., & Bakermans-Kranenburg, M. J. (2002). Development of empathy in girls during the second year of life: associations with parenting, attachment, and temperament. *Social Development*, 11, 451–468. <https://doi.org/10.1111/1467-9507.00210>

### **Chapter III: Attachment and the Development of Prosocial Behavior in Children and Adolescents: A Systematic Review**

Chapter based on:

Costa Martins, M., Santos, C., Fernandes, M., & Veríssimo, M. (2022). Attachment and the development of prosocial behaviors in children and adolescents: A systematic review. *Children*, 9(6), 874. <https://doi.org/10.3390/children9060874>

See also, for the corresponding poster:

Costa Martins, M., Santos, C., Fernandes, M., & Veríssimo, M (2022, 14-16 Jul.). Attachment and the development of prosocial behaviors and empathy in children and adolescents: A systematic review [Poster presentation]. *International Attachment Conference 2022 (IAC)*.

### Abstract

(1) Background: One key assumption of attachment theory is the relationship between security and the development of prosocial behavior. A secure child is more likely to feel and show concern for another individual, resulting in higher levels of prosocial behaviors (defined as voluntary behavior intended to benefit others — e.g., helping, sharing, comforting). (2) Method: Using a systematic review of the literature (PROSPERO: CRD42022290706), 703 articles were identified (EBSCO databases), of which 16 were considered eligible by the first two authors (inter-reviewer agreement: 85.714%). The criteria for an article's exclusion were as follows: samples of children/teens not living in natural contexts; studies on psychopathologies; intervention programs; qualitative designs; studies on development or the validation of measures; studies that did not reliably measure the variables studied. (3) Results and Discussion: The eligible studies revealed incongruous results about the potential associations between attachment security to mothers and fathers and prosocial behavior. More consistent and significant relationships were found between the quality of attachment and empathy, while the associations between attachment and prosocial behavior were inconsistent (e.g., nine articles revealed significant associations; seven did not). In six studies, empathy was revealed to play an important role as the mediator between attachment security and prosocial behavior. The limitations and future recommendations were discussed.

**Keywords:** attachment; prosocial behavior; prosociality; empathy; childhood; adolescence.

*“Attachment security contributes to the child’s capacity for empathy, moral understanding, and prosocial behavior.”*

In *Nurturing Relationships – From Neurons to Neighborhoods*, Thompson (1998)

## **Introduction**

In recent decades, there has been a growing interest in the impact of attachment relationships on children’s social, emotional, and cognitive development. Bowlby (1969, 1973, 1980) brought together the formulations of psychoanalysis, ethology, developmental psychology, and control systems theory to argue that an enduring, affective relationship with a caregiver promotes mental health and well-being throughout life (Shaver et al., 2016; Thompson et al., 2022). First, it operates at a sensorimotor level and then moves to a more symbolic level during childhood, allowing the child to reflect and talk about the feelings of herself and others. During childhood, children actively construct their internal working models of attachment relationships (Main et al., 1985). In this way, attachment theory is established, at its core, as a theory of prosocial behavior (Shaver et al., 2016).

One of the key concepts of attachment theory (Bowlby, 1969) is the existence of a caregiving system (from adult to child) that is fundamental in explaining the emergence and development of behaviors such as empathy, kindness, and care, which characterize sensitive adult-child interactions. The caregiving behavioral system is inherently prosocial, as it aims to relieve the distress of others. It probably evolved due to its inclusiveness and adaptability, ensuring the survival and reproduction of family members (Batson, 2010; De Waal, 2008; Hamilton, 1964a, 1964b; MacLean, 1985). As such, it provides a foundation for understanding prosocial behavior development (Shaver et al., 2016).

The caregiving behavioral system is wired to detect others’ needs and respond accordingly. However, it can be undermined by the caregiver’s anxiety and self-concern, making the quality of attachment closely related to the effectiveness of caregiving. While attachment security tends to foster empathy and prosocial behavior, insecurity is often associated with self-concern, self-protection, and misjudged efforts to understand and help others (Shaver et al., 2016).

Secure relationships present the child with a relational context where they can express and elaborate on their feelings, creating an optimal environment for the development of emotional understanding (Ontai & Thompson, 2002) that will promote prosocial behavior. Secure individuals

are more comfortable with closeness, so they will probably be able to support and be more sympathetic to others (Bartholomew & Horowitz, 1991; Baston, 2010; Bowlby, 1969). Prosocial behavior is normally described as including social-emotional domains such as empathy, compassion, generosity, forgiveness, and altruism (Baston, 2010; Shaver & Mikulincer, 2012), as well as behavioral domains such as helping, sharing, and comforting (Beier et al., 2019). It is typically defined as voluntary behavior intended to benefit others (Grusec et al., 2011). Prosocial behavior plays a central role in group organization and in establishing cooperation between individuals (Clark & Ladd, 2000). Across all development stages, it has been related to less loneliness (Cassidy & Asher, 1992; Clark & Ladd, 2000), better peer relationships and acceptance, and even enhanced academic performance (Asher & McDonald, 2009; Ladd et al., 1999). Theoretical explanations for the relationship between attachment security and a children's capacity to care for others include variables such as self-esteem (Laible et al., 2004), empathy (Kim & Kochanska, 2017; Laible et al., 2004), social abilities (Eceiza et al., 2011) as well as relation factors, such as positive parental affection (Michiels et al., 2010).

### **The present study**

Whether individual differences in children's prosocial behavior are related to parental attachment remains a central question in the literature. Findings have been inconsistent, some studies found significant associations between attachment style and children's emotional expression and prosocial behavior (e.g., Beier et al., 2019; Marcus & Kramer, 2001), while others find no such relationship (Bureau & Moss, 2010; Panfile & Laible, 2012), or only partial effects (e.g., Kim & Kochanska, 2017; Profe et al., 2021). Previous reviews of this complex relation did not employ a systematic review methodology or focused only on emotional constructs (e.g., sympathy, altruism), leaving a gap regarding the study and measurement of actual behavior, specifically prosocial behavior (Costa Martins, et al., 2021). For this reason, the main objective of this study was to implement a systematic review methodology in order to contribute to the literature on attachment and prosocial behavior (Shaver & Mikulincer, 2012; Shaver et al., 2016).

## **Methods**

### **Data Search Process and the Criteria for an Article's Eligibility**

The guidelines of the Preferred Reporting for Systematic Reviews were followed (PRISMA, Page et al., 2020) in order to explore the relationship between attachment and prosocial

behavior. Previously to any data extraction, the protocol of this review was registered on the International Prospective Register of Systematic Reviews, with the following PROSPERO number: CRD42022290706.

A systematic searching process of the data was carried out using all of the EBSCO databases (e.g., PsycINFO, Psychology and Behavioral Sciences Collection). The following Boolean terms were entered: AB attachment AND (AB prosocial behavior OR AB prosociality). The combination of these terms was searched in the title, abstract, and keywords. The search was applied until 15 February 2022 and resulted in 703 records. No timeline restrictions were imposed during this initial search procedure, seeing as how recent the resulting articles were from the start (the oldest was from the 1980s).

First, the screening of the articles' titles was conducted, duplicates were removed, and relevant studies were selected based on a pre-established list of inclusion and exclusion criteria (see also Table 1). The list of inclusion criteria included: (1) empirical research with an available abstract published in peer-review journals; (2) studies that were in Portuguese, English, French, Italian, or Spanish (languages mastered by the authors); (3) studies analyzing the associations between parental attachment and prosocial behavior. The abstracts were screened by the first and second authors to assess whether the paper was eligible and met these criteria. Those that did not meet the criteria were removed. Disagreements and discrepancies were always discussed until a consensus was reached. If a consensus was not achieved, two other independent reviewers were consulted. Finally, the full texts of the remaining articles (the ones selected through the abstract screening) were read and screened, and the same inclusion and exclusion criteria and selection process were used.

*Table 1. Complete list of the inclusion and exclusion criteria followed.*

Inclusion Criteria	Exclusion Criteria
(1) Empirical articles with available abstract published in peer-review journals;	(1) Studies on children or adolescents not living in natural contexts (e.g., institutionalized children; studies in the context of the pandemic);
(2) Articles published in Portuguese, English, French, Spanish, or Italian (languages mastered by the authors);	(2) Studies on prosocial behavior in the context of mental illness or addictive substance usage;
(3) Articles examining the	(3) Qualitative research;
	(4) Research aiming to develop, adapt, or validate measures of prosocial behavior;

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relationship between attachment and prosocial behaviors;	(5) Research that does not accurately/directly evaluate parental attachment or prosocial behavior;
(4) Articles with the following participants: children and adolescents (0-19 years old).	(6) Research on intervention programs;
	(7) Non-peer-reviewed articles (e.g., book chapters, conference papers, or posters).

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The criteria used for the exclusion of papers included (see Table 1): (1) participants living in non-natural environments (e.g., institutions); (2) studies on attachment or prosocial behaviors within the context of psychopathologies (e.g., substance abuse); (3) studies on intervention programs; (4) papers mainly aiming to validate measures; (5) studies with qualitative designs; (6) non-peer-reviewed papers (e.g., books, chapters, conferences, posters); (7) studies that used instruments that did not follow Bowlby's or Ainsworth's conceptualization to measure attachment.

### **Study Selection Plan**

A total of 703 articles were initially obtained through the databases and were screened by the first author, following the established and previously mentioned inclusion criteria and resulting in 671 articles being excluded. The abstracts of the remaining 32 articles were screened by the first and second author to determine if they were eligible and followed the inclusion criteria; only 21 were selected, and the respective full texts were further assessed independently by the first two authors for inclusion and eligibility. Finally, 16 articles (listed in Appendix A) met all the inclusion criteria and were deemed eligible (Figure 1). Discrepancies were always discussed until a consensus was reached.

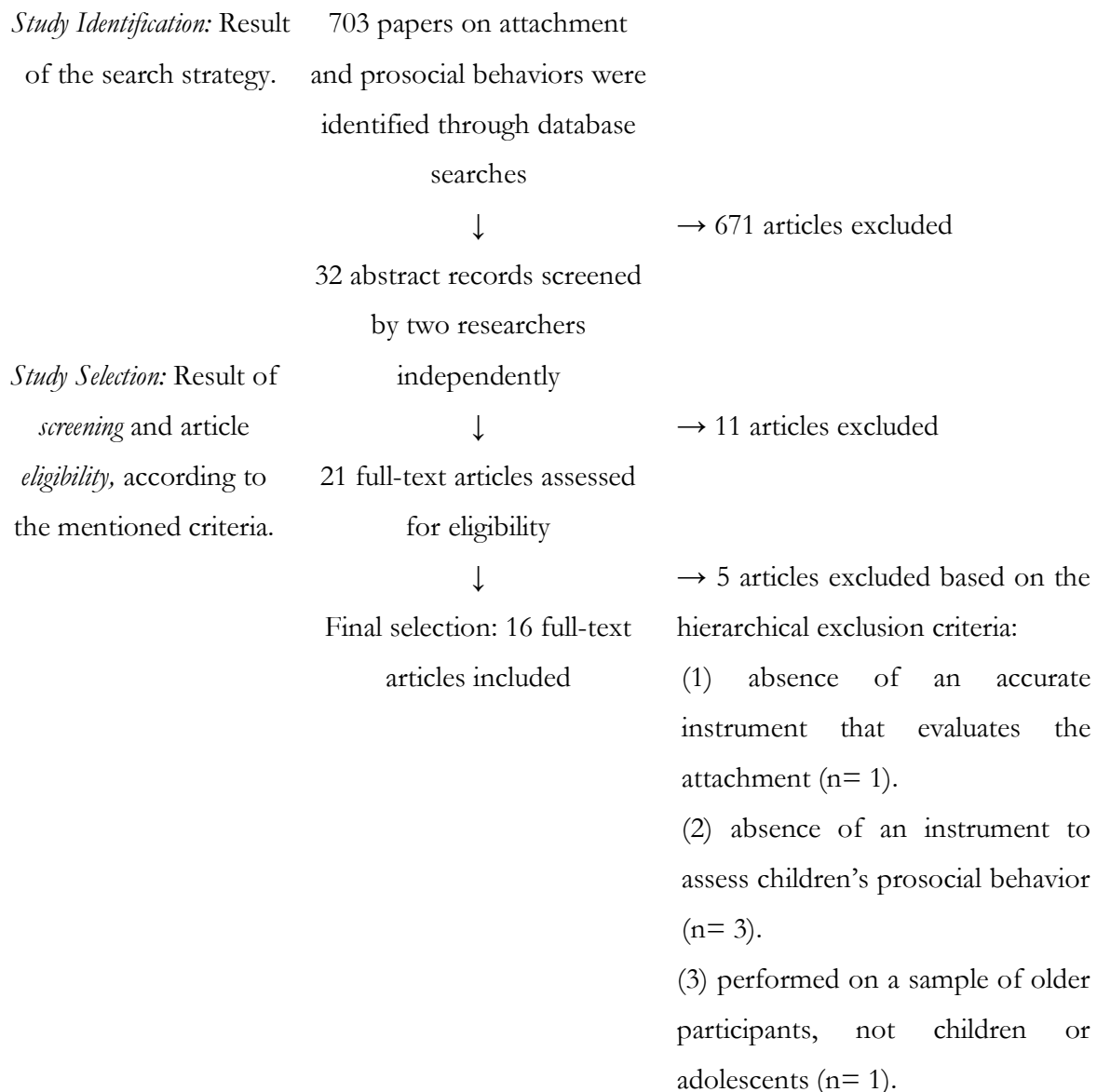
All steps and procedures of this systematic review - identification, screening, and selection of eligible studies - are synthesized in Figure 1, as previously described.

### **Data Extraction Plan**

The data extraction was carried out by three reviewers. Categories were established to summarize the results of the 16 selected studies and with the intent to identify (1) the overall characteristics of the studies (i.e., country of origin and theoretical background); (2) the overall characteristics of the samples used (i.e., socioeconomic status and age); and, finally, the (3) assessments of prosocial behavior (see Table 2, Results). This categorization of the retrieved articles was mainly conducted by the first author; however, the remaining reviewers were always consulted during this process. All disagreements or discrepancies were discussed until a consensus was reached.

The validity and quality of the studies were assessed through the Quality of Survey Studies in Psychology Score (Q-SSP, created by the OSF from the Center for Open Science see <https://osf.io/5aepd/>, accessed on 1 May 2022), the most adequate index for the various designs and instruments (e.g., questionnaires, observational measures, and scales) that are used in empirical psychological research.

*Figure 1. Flowchart of the full process of the identification and selection of the studies (according to the PRISMA, Page et al., 2020 guidelines).*



## Results

### Theoretical and Empirical Perspectives

As a theoretical background, the eligible papers also resorted to social psychology but mainly referenced developmental psychology (for example, the attachment theory and the framework on social-emotional development, while citing and referencing relevant authors on both topics, such as Bowlby, Cassidy, Asher, Waters, and Eisenberg). For the present review, studies that used secondary data were not found (Table 2). Merely five studies revealed a longitudinal design (31.25%). Most of the studies used child/adolescent reported measures to assess both attachment and prosocial behavior, while a minority used observational measures to assess prosocial behavior (11.76%) and parent-reported instruments to assess attachment (also 11.76%; see Table 2).

Table 2. Categorization and description of the eligible studies and respective samples.

Characteristics of the studies	Total of articles ( <i>n</i> )	Percentage (%)	Article Ida
<i>Theoretical background:</i>			
• Developmental psychology (socio-emotional development)	14	73.68%	1-10, 12, 14-16
• Social psychology	5	26.32%	6, 10, 11, 13, 14
<i>Type of data:</i>			
• Original	16	100%	1-16
• Secondary	0	0%	-
<i>Study design b</i>			
• Longitudinal	5	31.25%	2, 3, 4, 6, 15
• Cross-sectional	11	68.75%	1, 5, 7-9, 10-14, 16
<i>Assessment of prosocial behavior</i>			
• Child/Adolescent-reported	7	41.18%	5, 6, 11, 13, 14, 15, 16
• Parent-reported	4	23.53%	4, 7, 8, 12
• Teacher-reported	4	23.53%	2, 3, 10, 12
• Observation	2	11.76%	1, 9
<i>Assessment of attachment</i>			
• Child/Teen -reported	11	64.71%	3, 5, 6, 8, 10-16

• Parent-reported	2	11.76%	6, 7
• Observation	4	23.53%	1, 2, 4, 9
Characteristics of the samples	<i>N</i>	%	Article Ida
<i>Country of origin</i>			
• North America	7	43.75%	1, 2, 4, 5, 7, 9, 12
• Europe	4	25%	3, 8, 14, 15
• Oceania	1	6.25%	13
• Africa	1	6.25%	10
• Asia	3	18.75%	6, 11, 16
<i>Age group</i>			
• Children	10	58.82%	1-4, 7-11, 14
• Adolescents	7	41.18%	5, 6, 11-13, 15, 16
<i>Social economic status</i>			
• High/Moderate	8	42.11%	2-4, 7, 11-13, 15
• Low	4	21.05%	1, 3, 4, 13
• Not mentioned	7	36.84%	5, 6, 8, 9, 10, 14, 16
Assessment of prosocial behaviors	<i>N</i>	%	Article Ida
• Global score	16	84.21%	1-16
• Helping	1	5.26%	1
• Sharing	1	5.26%	1
• Comforting	1	5.26%	1

a. Article references are presented in Appendix A.

b. According to the inclusion criteria of the current review, only the quantitative results of studies employing mixed methods were included.

Note: some categories (e.g., theoretical background, assessment of prosocial behavior) are not mutually exclusive.

## Samples and Assessments

Most of the studies were from North America (more specifically, 43.75% in the USA) or Europe (25%). Studies on children (58.82%) were slightly more predominant than research involving adolescents. Most samples predominately presented participants of a medium-high economic status (42.11%), although a significant proportion of the authors did not assess or mention the socioeconomic status of their participants (36.84%; Table 2). All studies unanimously

chose to approach the assessment of prosocial behaviors with a global and final score; however, Beier and colleagues (2019) added an individual assessment of behaviors such as helping, sharing, and comforting.

The bulk of the participants were predominately Caucasian. The most frequently used instrument to measure adolescents' parental attachment was the Inventory of Parent and Peer Attachment (IPPA, Armsden & Greenberg, 1987), a questionnaire adapted to different languages (e.g., Spanish, Chinese), and the most consistent instrument used to measure attachment during childhood was the Attachment Q-Set (Waters, 1987; Waters & Deane, 1985). The Strengths and Difficulties Questionnaire (SDQ, Goodman, 2001), a self-reported questionnaire, was the most chosen instrument to measure prosocial behaviors among older children and adolescents. Observational measures were preferred to assess prosocial behavior in studies involving younger children.

Various research designs and statistical approaches were taken in different studies. The most common approach was testing specific conceptual models, (i.e., Kim & Kochanska, 2017; Li et al., 2020; Michiels et al., 2010; Profe et al., 2021; Shaver & Mikulincer, 2012; Vagos & Carvalhais, 2020; Zhao et al., 2020), where empathy played a frequent and significant role as a mediator between attachment security and prosociality. Secondly, we also frequently found Pearson's correlations in the extracted results, i.e., (Laible, et al., 2004; Marcus & Kramer, 2001; Panfile & Laible, 2012; Shoshani et al., 2021; Thompson & Gullone, 2008; Tur-Porcar et al, 2018). Despite taking the same approaches, the results were inconsistent. Further individual assessments of the participants, instruments, and results of the selected articles are presented in Table 3.

*Table 3. Synthesis of the sample dimensions, the participants' age and ethnicity, the instruments, the results, and the quality of the selected articles.*

Articles' ID, Authors (Date)	N	M age (SD)	Ethnicity	Attachment measures	Prosocial behavior measures	Results (associations between prosocial behaviors, PB, and attachment security, AS)	Q-SSPa score
1. Beier et al. (2019)	137 (57.66% females)	4.32 years (0.50)	Mostly African Americans, 66,4%	Preschool Strange Situation procedure (PSS, Clark & Ladd, 2000).	Observation and coding of behaviors such as helping, sharing, comforting.	<ul style="list-style-type: none"> <li>• AS predicted PB: <math>\beta = .24^*</math></li> <li>• AS predicted helping behaviors: <math>\beta = .65^{**}</math></li> <li>• Attachment avoidance predicted helping behaviors: <math>\beta = -.76^{**}</math></li> </ul>	12

2. Bureau & Moss (2010)	129 (53.48% females)	T1: 6.3 years (1.10)	-	Reunion procedure (Cassidy, 1988) and Attachment Story Completion Task (Bretherton et al., 1990)	Prosocial Behavior Questionnaire (Weir et al., 1981).	No differences were found in PB levels throughout the different attachment styles (T1: $F=1.2$ ; T2: $F=.58$ , both $p>.05$ ).	11
3. Eceiza et al. (2011)	154 (47% females)	7.39 years	-	Separation Anxiety Test (Kaplan, 1987; Klagsbrun & Bowlby, 1976).	<i>Profil Socio-Affective</i> (LaFrenière et al., 1992).	Ambivalent and secure children showed higher levels of prosocial behavior ( $F= 5.30^{**}$ )	10
4a. Kim & Kochanska (2017) – Family Study	101 (50.49% females)	T1: 15 months	Mostly Caucasian (80-90%)	Attachment Q-Set version 3.0; Waters, 1987; Waters & Deane, 1985).	Prosocial Behavior scale of Health Behavior Questionnaire (Essex, et al., 2002).	<ul style="list-style-type: none"> <li>• Direct effect of AS to mothers and PB: <math>\beta= .03</math>, <math>p&gt;.05</math></li> <li>• Direct effect of AS to fathers and PB: <math>\beta= .14</math>, <math>p&lt; .10</math>.</li> </ul>	14
4b. Kim & Kochanska (2017) – Play Study	186 (48.39% females)	T1: 30 months	Mostly Caucasian (70-90%)	AQS, version 3.0; Waters, 1987; Waters & Deane, 1985).	Infant-Toddler Social and Emotional Assessment (Briggs-Gowan et al., 2006).	Direct effect of AS on PB: $\beta=.08^{*}$ ;	10
5. Laible et al. (2004)	246 (70% females)	18.6 years (1.61)	15% Caucasian, 13% African American, 59% Latino	Inventory of Parent and Peer Attachment, IPPA (Armsden & Greenberg, 1987).	Global index of prosocial responding (Rushton et al., 1981).	Correlation coefficient: Between parent AS and PB = $.21^{**}$	12
6. Li et al. (2020)	425 (57.88% females)	13.97 years (1.67)	Mostly Asian (90-100%)	IPPA-Revised Chinese version (Li et al., 2014).	Strengths and Difficulties Questionnaire (SDQ, Goodman, 2001, Chinese version).	<ul style="list-style-type: none"> <li>• Self-reported PB and mother-reported attachment avoidance: <math>\beta = -.11^{*}</math></li> <li>• Self-reported PB and mother-reported attachment ambivalence: <math>\beta=.10^{*}</math></li> <li>• Self-reported PB and self-reported AS: <math>\beta= .32^{**}</math></li> </ul>	5

7. Marcus & Kramer (2001)	107 (51.40% females)	64 months	-	Strange Situation, (Main & Cassidy, 1988)	SS & competence (Rydell et al., 1997).	Parent-rating of children social competence (Rydell et al., 1997).	Correlation coefficients: <ul style="list-style-type: none"> <li>• AS and prosocial orientation: .57**</li> <li>• Attachment insecurity and prosocial initiative: -.48**</li> <li>• AS and prosocial initiative: .38**</li> <li>• Attachment insecurity and prosocial initiative: -.26*</li> </ul>	14
8. Michiels et al. (2010)	552 (54.27% females)	11.27 years (0.82)	Mostly Caucasian (92%).	Security Scale (Dutch version: Verschueren & Marcoen, 2002)	SDQ (Dutch version: Van Widenfelt et al., 2003).	Maternal and paternal AS, individually, were not significant predictors of PB ( $t=1.36$ and $t=1.66$ , respectively, both $p>.05$ ).	13	
9. Panfile & Laible (2012)	63 (47.61% females)	36 months	Mostly Caucasian (81%)	Attachment Set version 3 (Waters, 1987; Waters & Deane, 1985).	Q-3 children's responses to crying (based on Zahn-Waxler et al., 1983).	Correlation between AS and PB = .08, $p>.05$ , weak and non-significant.	14	
10. Profe et al. (2021)	520 (42% females)	12.33 years (0.52)	Mostly mixed-race (46%) and Caucasian (37%),	IPPA (Armsden & Greenberg, 1987).	Prosocial Tendencies Measure, PTM (Carlo et al., 2003).	Structural equation model coefficients: <ul style="list-style-type: none"> <li>• <math>\beta</math> Maternal AS and Global PB: .04, <math>p&gt;.05</math>.</li> <li>• <math>\beta</math> AS to Father and Global PB: .01, <math>p&gt;.05</math>.</li> </ul> Individual correlations coefficients: <ul style="list-style-type: none"> <li>• Maternal AS and Global PB: .10*</li> <li>• AS to father and Global PB: .06, <math>p&gt;.05</math>.</li> </ul>	13	
11. Shoshani et al. (2021)	1426 (681 females, 47.76%)	11.97 (2.01)	Mostly Jewish (97%)	Attachment Style Classification Questionnaire (Finzi et al., 2000)	SDQ (Goodman, 2001).	Correlation between AS and PB: .17*** (positive and significant)	13	
12. Simons et al. (2021)	68 (36 females, 52.94%)	13.25 years (0.33)	Mostly Caucasian	IPPA (Armsden & Greenberg, 1987).	Prosocial items (teacher and parent report, based on	Maternal and paternal AS were not significantly or positively correlated to PB (self-reported, -.07, .06; parent-reported, -.11, -	13	

						(Achenbach, 1991a, 1991b)	.10; or teacher- reported, -.21, -.27).	
13.	Thompson & Gullone (2008)	281 (168 Females, 59.78%)	14.83 years (1.71)	-	IPPA-Revised (Gullone, & Robinson, 2005).	SDQ (Goodman, 2001).	Correlation between PB and AS: .25***	14
14.	Porcar et al. (2018)	Tur- 1447 (49.6% females)	9.27 years (1.36)	Mostly Caucasian (79.5%) and Latinos (12.1%)	Security Scale (Spanish version: Richaud et al., 2001)	<i>Escala de conducta prosocial</i> (Spanish version: Tur, 2003)	Correlations: <ul style="list-style-type: none"> <li>• between maternal AS to and PB: .29***;</li> <li>• between paternal AS and PB: .25***</li> </ul>	12
15.	Vagos & Carvalhais (2020)	375 (203 females, 54.1%)	16.62 years (1.03)	-	IPPA (Portuguese version: (Neves et al., 1999)	Peer Experience Questionnaire – Revised (Portuguese version: Queirós & Vagos, 2016)	Significant structural equation model coefficient: <ul style="list-style-type: none"> <li>• maternal AS and PB, <math>\beta = .02^*</math></li> </ul>	13
16.	Zhao et al. (2020)	1177 (51.8% females)	15.37 years (1.71)	Mostly Asian (90-100%)	IPPA – Chinese simplified version (Yang et al., 2016).	PTM (Carlo et al., 2003)	Non-significant structural equation model coefficients: <ul style="list-style-type: none"> <li>• maternal AS and PB, <math>\beta = .01</math></li> <li>• paternal AS and PB, <math>\beta = -.03</math></li> </ul>	12

a. Quality Assessment Checklist for Survey Studies in Psychology (Q-SSP) score; \* p-value < 0.05; \*\* p-value < 0.01; \*\*\* p-value < 0.001.

In summary, Beier et al. (2019) revealed a robust positive association between attachment security and children's spontaneous prosocial and helping behaviors. Bureau and Moss (2010), in contrast to Eceiza et al. (2011), found no significant differences in prosocial behavior levels considering different attachment styles (secure, ambivalent, avoidant, and disorganized). However, these authors revealed that children with a disorganized attachment classification or representation developed higher externalizing scores than secure and avoidant children.

Kim and Koschanka (2017) showed that for mother- and father-child dyads, security moderated the path from empathy to prosociality. Insecure and unempathetic children were particularly low in terms of prosociality.

In contrast to Panfile and Laible (2012), Profe et al. (2021), and Simons et al. (2001), studies such as those by Laible et al. (2004), Shoshani et al. (2021), and Thompson and Gullone (2008)

found significant and positive correlations between adolescents' quality of attachment and prosocial behaviors. Tur-Porcar et al. (2018) took it even further and found positive and significant correlations between prosocial behaviors in children and attachment to both parental figures, i.e., mothers and fathers. Marcus and Kramer (2001), in turn, demonstrated how prosocial initiative and orientation are positively and significantly correlated with attachment security and negatively and significantly correlated with attachment insecurity.

Laible et al. (2004), who studied adolescents, also pointed out the potential role of prosocial behavior as a mediator between parental attachment and self-reported self-esteem. Li et al. (2020) provided evidence for their conceptual model and showed how attachment security is positively and significantly associated with prosocial behavior, as opposed to attachment ambivalence.

Predictive multiple regression models also showed incongruous results (attachment as a significant predictor of prosociality in children in Beier et al. (2019) and non-significant in Michiels et al., 2010). Regarding adolescents, structural equation models showed non-significant associations between these two variables (i.e., Profe et al., 2021; Zhao et al., 2020).

## Discussion

The present systematic literature review revealed some inconsistency in the results reported by different studies, which agrees with what had been previously reported by authors such as Shaver et al. (2016) and Beier et al. (2019). Even studies with corresponding quality, designs, and statistical tests reached different conclusions. For example, Bureau and Moss (2010) found no significant differences in the levels of prosocial behaviors across the different attachment styles, but Eceiza et al. (2011) recorded higher values of prosocial behaviors with the secure and ambivalent styles (when compared to the avoidant style). Despite this inconsistency, it is important to stress that 11 out of the 16 selected papers revealed a significant association between the two domains under consideration. These significant associations are in line with what has always been advocated by attachment theory, i.e., that caring and responsive parental and attachment figures promote secure internal models that allow the child (or adolescent) to regulate his or her emotions and to be able to care for others (Bowlby, 1969, 1973, 1980; Shaver & Mikulincer, 2012). This theoretical framework is in line with the empirical findings of the selected studies (which predominantly found positive associations between the variables being studied), and with the fact that only one of the articles, by Simons et al. (2001), found a negative association between parental

attachment and prosocial behaviors. However, even taking this result into account, Simons et al., (2001) did not find a significant association (see Table 3). Thus, emphasizing that attachment to one's mother and attachment to one's father revealed similar evident associations with prosocial behaviors in children, (e.g., Tur-Porcar et al., 2018).

The complexity with which attachment and prosocial behavior relate and develop is noticeable in the conceptual models and designs using structural equation models in the selected studies. In these models, a significant role of empathy as a mediating variable stands out, (i.e., Kim & Kochanska, 2017; Laible et al., 2004; Panfile & Laible, 2012; Profe et al., 2021; Thompson, & Gullone, 2008).

It is worth noting that although many of the selected studies met good quality standards (Table 3, Q-SSP cut-off point: 13), some were only marginally good or of threshold quality (scoring 10 or above, except for one study by Marcus and Krammer [2001]). This highlights the limited presence of empirically relevant information in some of the reviewed studies - particularly information needed in a psychological research context.

The samples presented in this review were revealed to be skewed and lacking in regard to cultural and social diversity. Noticeably, half of the selected studies presented predominantly Caucasian samples (Table 3) and a medium-high social status (Table 2). This represents a gap in the literature on the reporting and understanding of the different contexts and resulting social nuances.

Only sixteen papers were considered and extracted, and the present systematic review clearly indicates that this is a topic that needs further empirical exploration. Several questions remain. For example, besides empathy, what are the other possible mediators between attachment and prosocial behavior (e.g., control variables such as verbal intelligence; sociodemographic and emotional variables). Further, biological (e.g., the presence of relevant hormones such as cortisol or oxytocin) and contextual variables (social environments and ideologies) were either not measured or not highlighted in the results found.

Another important goal is to expand and develop the definition of prosocial behaviors that can be observed. To date, only Beier et al. (2019) referred to helping, sharing, and comforting but did not clarify how each behavior can be associated with each developmental stage. Certainly, these behaviors can have different dynamics throughout childhood, puberty, and adolescence and can be differently related to peer interactions and friendships. Additionally, research should take

into consideration the differential role of facilitating and non-facilitating (social) contexts, especially if prosocial behavior is different in function of the target. Future studies should elect a longitudinal design, explore different mediating variables, and, if possible, use observational measures. Finally, it is fundamental to address the possible differentiating contributions of paternal and maternal attachment.

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## Appendix A. Articles' ID: The list of articles that made it through the selection process

1. Beier, J. S., Gross, J. T., Brett, B. E., Stern, J. A., Martin, D. R., & Cassidy, J. (2019). Helping, sharing, and comforting in young children: Links to individual differences in attachment. *Child Development, 90*(2), e273-e289. <https://doi.org/10.1111/cdev.13100>.
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4. Kim, S., & Kochanska, G. (2017). Relational antecedents and social implications of the emotion of empathy: Evidence from three studies. *Emotion, 17*(6), 981-992, <http://doi.org/10.1037/emo0000297>.
5. Laible, D. J., Carlo, G., & Roesch, S. C. (2004) Pathways to self-esteem in late adolescence: The role of parent and peer attachment, empathy, and social behaviours. *Journal of Adolescence, 27*(6), 703-16. <https://doi.org/10.1016/j.adolescence.2004.05.005>.
6. Li, J.-B., Guo, Y.-J., Delvecchio, E., & Mazzeschi, C. (2020). Chinese adolescents' psychosocial adjustment: The contribution of mothers' attachment style and adolescents' attachment to mother. *Journal of Social and Personal Relationships, 37*(8-9), 2597-2619. <https://doi.org/10.1177/0265407520932667>.
7. Marcus, R. F., & Kramer, C. (2001). Reactive and proactive aggression: Attachment and social competence predictors. *The Journal of Genetic Psychology: Research and Theory on Human Development, 162*(3), 260-275. <https://doi.org/10.1080/00221320109597483>.
8. Michiels, D., Grietens, H., Onghena, P., & Kuppens, S. (2010). Perceptions of maternal and paternal attachment security in middle childhood: Links with positive parental affection and psychosocial adjustment. *Early Child Development and Care, 180*(1-2), 211-225. <https://doi.org/10.1080/03004430903415064>.

9. Panfile, T. M., & Laible, D. J. (2012). Attachment security and child's empathy: The mediating role of emotion regulation. *Merrill-Palmer Quarterly*, 58(1), 1-21. <http://doi.org/10.1353/mpq.2012.0003>.
10. Profe, W. B., Wild, L. G., & Tredoux, C. (2021). Adolescents' responses to the distress of others: The influence of multiple attachment figures via empathic concern. *Journal of Social and Personal Relationships*, 38(5), 1671-1691. <https://doi.org/10.1177/02654075211000433>.
11. Shoshani A., Braverman, S., & Meirow, G. (2021). Video games and close relations: Attachment and empathy as predictors of children's and adolescents' video game social play and socio-emotional functioning. *Computers in Human Behavior*, 114, 106578. <https://doi.org/10.1016/j.chb.2020.106578>.
12. Simons, K. J., Paternite, C. E., & Shore, C. (2001). Quality of parent/adolescent attachment and aggression in young adolescents. *The Journal of Early Adolescence*, 21(2), 182-203. <https://doi.org/10.1177/0272431601021002003>.
13. Thompson, K.L., & Gullone, E. (2008). Prosocial and antisocial behaviours in adolescents: An investigation into associations with attachment and empathy. *Anthrozoös*, 21(2), 123-137. <https://doi.org/10.2752/175303708X305774>.
14. Tur-Porcar, A. M., Doménech, A., & Mestre, V. (2018). Vínculos familiares e inclusión social. Variables predictoras de la conducta prosocial en la infancia [Family linkages and social inclusion. Predictors of prosocial behaviour in childhood]. *Anales de Psicología*, 34(2), 340-348. <https://doi.org/10.6018/analesps.34.2.308151>.
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16. Zhao, F., Liu, M., & S., Li. (2020). Paternal coparenting behaviour and adolescent prosocial behaviors: Roles of parent-child attachment, peer attachment, and gender. *Children and Youth Services Review*, 119, 105629. <https://doi.org/10.1016/j.childyouth.2020.105629>.

#### **Chapter IV: Attachment, sympathy, and the feeling of guilt: a longitudinal study**

Chapter based on:

Costa Martins, M., Fernandes, M., Fernandes, C., Veríssimo, M. (submitted). Attachment, sympathy, and the feeling of guilt: a longitudinal study during childhood. OSF Registration: <https://doi.org/10.17605/OSF.IO/MQB9E>

See also, for the corresponding presentation:

Costa Martins, M., Fernandes, M., Fernandes, C., Morais, I., Pires, E., & Veríssimo, M. (2025, 28-30 de Maio). *Relações de vinculação, simpatia e o sentimento de culpa - um estudo longitudinal na infância*. [Comunicação]. XII Simpósio Nacional de Investigação em Psicologia, Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto (FPCEUP), Porto, Portugal.

### Abstract

Secure attachment relationships facilitate children's confident social exploration, promoting help-seeking and help-giving, enhanced social competences and the development of appropriate moral emotions (i.e., sympathy, response to another's suffering; and healthy guilt, following transgressions or omissions of pro-social behavior). Emotion regulation enables adaptive emotions, preventing distress and adverse developmental outcomes. Despite the critical nature of the preschool period for socio-emotional and moral development, recent empirical research during this stage remains limited. This study hypothesized that secure attachment positively effects moral emotions' domains (sympathy for others, for self; healthy guilt—ethical and non-ethical), through emotion regulation's mediation. Sympathy and guilt were hypothesized to be correlated positively with prosociality and negatively with antisociality. Seventy-four children (48.64% girls; M=53.69 months, SD=4.16) were longitudinally assessed. Attachment security was measured using the Attachment Story Completion Task. Six months later, emotion regulation, sympathy, guilt (Eiseberg's scale; Socioemotional responding task) and social behaviors (SCBE-30 scales - parent and teacher reports) were assessed. Attachment exerted significant total effects on sympathy and guilt's several domains, with emotion regulation mediating these—except for sympathy towards others. Overall, both sympathy and guilt were negatively correlated with social isolation. These findings underscore educational and clinical implications for fostering secure attachment and emotion regulation in early childhood.

**Keywords:** attachment relationships; emotion regulation; moral emotions; sympathy; guilt.

*“Our capacity to care for others is rooted in our experience of being cared for”.*

A secure base, John Bowlby (1988)

## **Introduction**

### **Caring for others and its foundations in attachment relationships and emotion regulation abilities**

Attachment theory (Bowlby, 1969/1982; 1973; 1988) has provided a robust framework for understanding clinical, developmental, and social outcomes related to mental and physical health. Secure attachment in childhood, developed through sensitive and responsive care, fosters the internalization of a secure internal working model (IWM). This model allows children to respond effectively and in a regulated manner to others’ vulnerability or suffering (Waters & Waters, 2009). By being associated with positive mental representations of oneself and others (Bowlby, 1969/1982; Bretherton & Munholland, 2016), secure attachments promote an intrinsic sense of sympathy and the ability to regulate one’s emotions while addressing others’ needs.

Emotion regulation emerges as an important factor in moral emotional development, including in the adaptive and healthy development of sympathy. Eisenberg et al., (1994) argued that an individual’s capacity to regulate emotions within a tolerable range facilitates sympathy by enabling them to understand others’ emotions without becoming overwhelmed. As with basic emotions (i.e., sadness, happiness, anger), it is important for moral emotions (i.e., empathy, sympathy, guilt, compassion, shame) to be experienced in a regulated manner, so as to not lose their adaptive value. Otherwise, they may contribute to less adaptive developmental trajectories, compromising one’s emotional well-being, relationships and interactions with others (Muris & Meesters, 2013). Longitudinal studies, such as the one by Colasante and Malti (2017), highlight the significance of emotion regulation in fostering prosocial behaviors and mitigating aggression in early childhood.

Children with secure attachment representations throughout their lives are thus more at ease socially, especially when faced with intimacy and interdependence, and they exhibit a greater capacity for sympathy, care, and support in a healthy and reciprocal manner (Cassidy, 1994; Cassidy et al., 2018). Since it can model our own way of caring for others, an internalized sense of security might imply an ability to help diminish another’s suffering. According to Bowlby (1973), a threat (i.e., feelings of hurt, need, distress) automatically activates attachment-related responses (the need for care and a sense of security and protection), alongside behaviors that will allow the individual

to meet said needs. This activation, in turn, can also encourage human beings to help others. Otherwise, the individual may feel that ensuring security and care mostly for themselves is more urgent and necessary, rather than providing care for others. This last trajectory is considered to widely characterize an insecure attachment (Cassidy et al., 2018). Children with insecure attachment are thus more likely to have negative self-representations and defensive attitudes toward others, prioritizing self-protection over prosocial behavior (Shaver et al., 2016a; 2016b). Previous studies have tested the relation between attachment insecurity and dysregulation in children (9-16 years old; Bender et al., 2015) and higher aggression levels (in preschool children, Fernandes et al., 2019a).

### **The specific cases of sympathy and guilt, and their role in kindness and reparation**

Sympathy is precisely described in the developmental psychology literature as an other-oriented moral emotion, and as the feeling of concern for another person's condition (usually, a state of need or distress), when presented with reasons that validate such concern (either physical or emotional reasons), (Eisenberg et al., 2006; Eisenberg & Eggum, 2009). Sympathy for others should be distinguished from a related construct – self-directed sympathy. Despite being less commonly used in the literature, it's a self-oriented moral emotion and no less important for socio-emotional development and the child's development of a sense of self and of the world, representing the feeling of care and concern for oneself when in need or experiencing suffering (Gibhardt et al., 2024; Eisenberg & Eggum, 2009; Malti, 2017). Both sympathy and guilt can help children navigate social conflicts, and avoid aggressive confrontations (Colasante & Malti, 2017). In essence, both feelings are relevant domains of the socioemotional development of the human being, since both involve, either directly or indirectly, an awareness of the other person.

Despite its recognized importance, guilt – particularly its ethical and non-ethical dimensions – remains understudied compared to other moral emotions, such as empathy and sympathy (Eisenberg et al., 2013). Ethical guilt, rooted in concern of others' well-being and fairness, promotes reparative and prosocial behaviors, while non-ethical guilt, though driven by fear of punishment, can still inhibit misconduct (Malti et al., 2018). These dimensions highlight the complexity of guilt as a construct and its dual role in shaping children's social and moral development. Guilt can be adaptive and can play a role in the development of empathy (Tangney, 2012) and is negatively associated with externalizing behavior (Muris & Meesters, 2013), such as yelling, pushing, hitting (LaFreniere & Dumas, 1996). It can prevent misconduct (Tangney et al., 2007) and function as an emotional barometer, which helps children understand the extent to which an aggressive action (a previous one, or a planned one) corrupts their internalized moral principles or promotes distress

in others. Healthy guilt, as a broader construct, can be conceptualized in terms of the dimensions of ethical and non-ethical guilt (Malti, 2017; Malti et al., 2018). The first seems to be rooted in the painful idea of negatively affecting others' wellbeing and stems from a strong sense of fairness and justice, while the second appears to stem from fearful expectations of punishment from authority figures, causing one to feel anxiety over being caught and/or punished for their wrongdoings. From this perspective, ethical guilt is widely considered to be a more adaptive and prosocial response to transgressions, and it has been associated with more reparative and prosocial behavior, thereby fostering healthy social development (Mehrotra et al., 2022). Children who scored higher on ethical guilt were more likely to adopt defending behaviors in a bullying situation (Nocentini et al., 2020) and were less likely to be perceived as aggressive than their counterparts (Jambon & Smetana, 2020; Tani & Ponti, 2018), while children with lower ethical guilt were more prone to display externalizing behaviors (Colasante et al., 2023). These results underscore the complexity of non-ethical guilt, and how even though it isn't as motivated by developed ethical reasonings or moral considerations, it might still contribute to prosocial behavior and inhibit externalizing impulses (Jambon et al., 2022).

Recent findings suggest a link between attachment security and proneness for ethical guilt, with secure attachment fostering a constructive sense of responsibility and reparation (Mango, 2024). However, the mediating role of emotion regulation in this relationship remains inconclusive (e.g., Murphy et al., 2015; Szentágotai-Tatar & Miu, 2016).

Despite this strong theoretical foundation, few recent studies have addressed the beginnings of the emergence of these specific moral emotions. More precisely in the pre-school years, pertinent years for studying these domains since they mark the beginning of the development of morality (Piaget, 1932). Instead, most studies (including the previously described) studied empathy instead, and used samples of middle school children or adolescents (as demonstrated by previous systematic reviews of the literature, Costa Martins et al., 2021). From these, only a small number of these studies have looked at the association between attachment relationships and moral emotions when mediated by emotion regulation (i.e., Murphy et al. 2015; Panfile & Laible, 2012; Mango, 2024). Even seminal studies such as those by Cassidy et al. (1996) have examined the association between attachment style and empathy in children (not sympathy), as evidenced by the remarkable longitudinal study by Sroufe (2005). This seminal study also examined the impact of childhood attachment on emotional sensitivity (related to empathy, according to Sroufe), not only in childhood, but focusing on adolescence and even adulthood. Additionally, the two studies under consideration have not been conducted recently. It is also noticeable that studies associating both emotion regulation, sympathy, and guilt in preschoolers (3- to 6- years old) have not measured

attachment quality (i.e., Colasante & Malti, 2017; Eisenberg & Fabes, 1998; Malti et al., 2013; Song et al., 2018).

### **Rationale and Objectives**

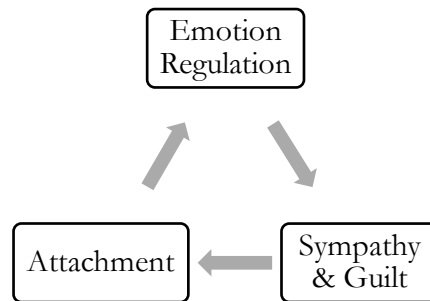
This study aims to investigate the impact of attachment security on the development of moral emotions, namely sympathy and guilt, while examining the mediation role of emotion regulation. Although existing research has explored these constructs in older children and adolescents (e.g. Mikulincer et al., 2005), there remains a significant gap in understanding this effect during younger years. Another gap in the literature worth exploring is the connection between these relational, emotional skills and resources with behavioral problems that are less visible compared to more prominent ones (e.g., aggression), such as internalizing and isolation (avoidance and social distancing).

The literature nonetheless emphasizes that secure attachments may serve as foundations for the development of kindness during childhood. Secure children may be more willing to adopt cooperative postures and express feelings of guilt, when an ommissive or aggressive behavior has been present (e.g., not sharing, not helping). Also, secure children tend to talk more about positive and negative emotions and are normally more involved in their conversations with their parents (Etzion-Carasso & Oppenheim, 2000; Fivush & Vasudeva, 2002; Reese & Farrant, 2003). Securely attached children are more competent in understanding positive and negative emotions (e.g., Laible & Thompson, 1998; Steele et al., 1999). These communication-related characteristics may be related to the development of moral emotions (whether they are oriented towards others, such as sympathy, or towards oneself, such as guilt).

The main hypothesis in this study postulates that attachment security will predict higher levels of sympathy and guilt (Akbağ & Erden İmamoğlu, 2010) mediated by emotion regulation abilities (Eisenberg et al., 2014; Eisenberg, 2000; see Figure 1) and including the several domains of sympathy (for others and for the self) and guilt (ethical, non-ethical, and healthy dimensions). Additionally, these constructs are expected to correlate positively with children's social competence and prosocial behavior aligning with prior findings (i.e., Colasante et al., 2022; Jambon & Smetana, 2020; Shaver et al., 2016a; 2016b; Tani & Ponti, 2018). With these hypotheses in mind, it should also be understood that the opposite effect is expected regarding negatively valenced outcomes (such as aggression and social isolation, including both sides of misconduct and behavioral problems – internalizing and externalizing). Addressing these research gaps will provide a more

comprehensive understanding of the interplay between attachment, emotion regulation and moral emotional development in early childhood.

*Figure 1: Hypothesized mediation general model between attachment, sympathy, and guilt.*



## Methods

### Participants

A total of 76 preschool children from 4-year-old classes, aged 4 to 5, participated in the study. One exclusion criterion was that the child's primary language must be Portuguese or English (languages spoken by the researchers). Of the selected participants, 6 were bilingual, and 4 of them preferred English over Portuguese. Additionally, children with diagnosed developmental disorders or very low verbal intelligence scores (verbal IQ <85, as measured by the WPPSI – see Measures) were excluded, resulting in the exclusion of 2 participants. This led to a final sample of 74 children (36 girls and 38 boys; average age of 53.69 months (SD = 4.16) at the time of the first session (S1), with 71 from the Lisbon district, 2 from Porto, and 1 from Leiria. A minimal attrition rate of 1.35% (1 child) was documented during S2.

Most participants were Portuguese (90.50%), with 2.70% having dual nationality, and 6.8% having other nationalities (e.g., Spanish, Chinese). Most lived in households with both parents and siblings (72.20%) or just with their parents (19.40%). The majority (54.10%) were firstborns and 78.5% had siblings. Regarding parental marital status, 83.60% of parents were married or in a civil union, 5.50% were divorced, and 9.60% were single. Most mothers hold a master's degree (48.60%) or a bachelor's degree (44.60%). Fathers also hold a bachelor's degree (48.60%) or a master's degree (37.50%). Nearly all fathers worked full-time (98.60%, the remaining 1.40% were freelancers). Most mothers (87.80%) worked full-time, and 8.20% worked part-time or were freelancers. A small percentage (6.80%) of mothers were unemployed. The average age of mothers was 38.73 years (SD = 4.36), and fathers had an average age of 41.05 years (SD = 5.10). Parental questionnaires and reports were mostly completed by mothers (91.9%).

## Procedures

This research went through a process of approval by its University’s Ethics Committee. When contact was made with the children’s schools, the guardians of each participant were given an informed consent form based on the Declaration of Helsinki for research involving human participants and according to the standards of the American Psychological Association (APA). Participation, which is assented to and voluntary, had no associated costs and can be interrupted at any time. Anonymity and confidentiality were guaranteed.

To recruit participants, several schools in and around Lisbon were contacted. Five schools agreed to collaborate, three of which collaborated over the course of two or three school years. A total of 244 informed consents were sent (31.11% acceptance rate – one should consider the pandemic context of the first two years of the project).

In addition to this effort involving schools, the project was announced via social media (Facebook and Instagram). Only 6 of the 76 children found out about the study this way and participated outside the school setting – Zoom (n=2, due to pandemic reasons or geographical distance), the family’s home (n=1).

This study lasted for three school years (2021-2024) and followed a longitudinal design, with two collection times with each child (see table below).

*Table 1. Plan for data collection with the participating children*

Session 1 (S1, starting point)	Session 2 (6 months after S1).
Verbal intelligence (Verbal IQ, WPSSI)	SERT (Guilt, sympathy, and emotion regulation)
Heteronomy and autonomy scale (Moral development)	Sympathy (Eisenberg’s scale)
Bretherton’s Attachment Story Completion Task (Attachment security)	

Note: see “measures” section, for more information and details on the mentioned instruments.

Additionally, alongside the children’s assessments, parents and teachers completed questionnaires evaluating social competence, emotion regulation, and, in the case of parents, their perceptions of the child’s sympathy.

## Measures

In addition to a sociodemographic questionnaire completed by the parents—which allowed for controlling variables such as age, gender, parental education and marital status, number of siblings, and hours the child spends at school—both parents and teachers provided reports on the child’s social competence and emotion regulation shortly before or concurrently with Session 1 (S1). Furthermore, parents also reported on the child’s sympathy.

*Emotion regulation: Portuguese version of the Emotion Regulation Checklist (ERC, Fernandes et al., 2024; original version from Shields & Cicchetti, 1997).*

It assesses emotional lability, intensity, valence, flexibility, and situational appropriateness of emotional expression in pre-school and school-age children. It measures emotion regulation, assessing whether the child has the ability to adapt their emotional responses to specific events. It should be completed by an adult who regularly contacts and knows the child well (e.g., teachers, parents, educators). Its 23 items assess both positive and negative aspects of emotion regulation and are rated on a 4-point Likert scale (1-never, 4-always). They are divided into two subscales: emotion regulation (8 items) and emotional lability (15 items).

Reliability of the original ERC’s subscales (Shields & Cicchetti, 1997) varied from .59 to .96 (Cronbach’s  $\alpha$ ). In its own validation, the ERC’s Portuguese version (Fernandes et al., 2024) obtained Cronbach’s alphas of .66 (emotion regulation) and .80 (lability). The study employed the most recent versions of the emotion regulation scale for both parent and teacher reports. Cronbach’s alpha coefficients for the parent report were .65 for Emotion Regulation and .68 for Lability; for the teacher report, .70 and .68, respectively.

*Social competence, aggression and social isolation – Social Competence and Behavior Evaluation-30 (SCBE-30, LaFreniere & Dumas, 1996 – Portuguese version, Fernandes et al., 2020).*

Parents and Teachers completed the SCBE Social Competence scale to measure the child’s social competence (10 of the 30 items, for example “Negotiates solutions to conflicts with other children”), anxiety-withdrawal (other 10 items, for example “Inhibited or uneasy in the group”), and anger-aggression (remaining 10 items, for example - “Gets angry when interrupted”). SCBE original version revealed great internal consistency (Cronbach’s alphas: .84 to .88, LaFreniere & Dumas, 1996). In this study, the Cronbach’s alpha coefficients for the parent reports were .83, .73, and .78 for the social competence, anxiety-withdrawal, and anger-aggression scales, respectively. For the teacher reports, the corresponding alphas were .88, .64, and .78. Consistent with the

previously described scales, subscale scores were averaged to create composite variables for each construct.

During S1, following the example of international literature and good practice in research with children, control variables such as verbal intelligence and moral development were also considered:

*Verbal intelligence: Wechsler Preschool and Primary Scale of Intelligence: WPPSI-R, Portuguese version (Seabra-Santos et al., 2003).*

For each participant, the 6 subtests corresponding to the verbal domain tasks will be scored: information, vocabulary, word reasoning, comprehension, similarities, and picture naming. The results of these will be assigned a standardized verbal IQ score (90 or higher being the score that indicates to a normative level in this domain). This instrument, which was associated with one of the participants' exclusion criteria, was primarily implemented to differentiate between the participating children who did not have a normative verbal IQ score (thus ensuring the comprehension of the study concepts).

*Moral development: Heteronomy and autonomy scale (Portuguese version, Fonseca, 1987).*

Based on Piaget's (1932; 1977) moral development theory, this task aims to assess different aspects of the concepts of heteronomy and moral autonomy. It consists of four vignettes illustrated by seven black and white cards, and these stories will correspond to a response from the child, which could be autonomous, intermediate, or heteronomous morality. Three researchers independently coded a portion of the data (15% of the data), and inter-coder agreement was obtained using Fleiss's  $\kappa = .81$  (81.35%).

Also, during S1, attachment security was measured:

*Attachment Story Completion Task (ASCT, Bretherton et al., 1990).*

This task assesses internal operative models of attachment. It is administered individually, in a quiet, equipped space. It includes chairs, a table, a playhouse and props to help the child create stories. The recording takes place in video format.

The child is presented with a series of stories that suggest common family themes, e.g., a birthday party; a child who must stay with another caregiver overnight. After this presentation (e.g., "Mom, Dad are going away for the night. Susana says: 'take me with you'; but Mum says: 'no, you

have to stay here with our neighbor Sara’.”), the child is asked to “tell me and show me what happened afterwards”. Based on the answers and the continuity given to the script of each story, a global score is given using a 7-point scale, to assess the degree of attachment security. The two children who participated via Zoom were still tasked with the continuation of the stories through narration, while the interviewer adopted the role of the dolls, despite the physical separation.

The children’s stories were scored by two independent trained coders who were blind to any other information about the child, and a global score was given to the last three stories (monster under the bed, separation, and reunion). As mentioned, these summary scores of the three stories could range from 1 (odd/deviant stories that include failure of the attachment figure to protect the child, and/or failure to recognize the attachment relevance of the events being represented in the narrative) to 7 (complete stories that clearly suggested a secure base for exploration and a haven of safety when needed). This scoring system was assessed in its Portuguese version (alongside other language’s versions, Vaughn et al., 2019). The inter-observer reliability between the three observers was calculated using Fliess’s  $\kappa = .91$  (90.5%), using a portion of the data (15%).

Finally, during Session 2 (S2, 6 months later), sympathy, guilt and self-reported emotion regulation were measured. Concluding, thus, all moments of data collection.

*Sympathy: Eisenberg sympathy scale (Eisenberg et al., 1991, Portuguese preliminary version, Costa Martins et al., 2024).*

Widely used in research with children (i.e. Catherine & Schonert-Reichl, 2011; Malti et al., 2009), the sympathy scale can draw on children’s self-reports and the reports of primary caregivers. This instrument has currently been translated, but it needs a final validation for the Portuguese population.

The children are read 6 statements (e.g., “I often feel sorry for other children who are sad or in trouble”). After reading this, they are asked whether the sentence describes them (or not) and, if so, how strongly. On a scale of 1 to 5, the score is assigned to each item as follows: “This is not like me/ I am not like this”, with 1; “This is sort of like me/ I am more or less like this” with 3; and “This is really like me/ I am really like this”, with 5. The Cronbach’s  $\alpha$  of the original scale was .80, indicating good internal consistency.

This study used the two versions of this scale - for parents and for children (pictorial, self-report) and obtained an internal consistency of .67 and .70 (S2) respectively. Interestingly, the original version of this scale also obtained a slightly lower reliability for the self-reported version for children (also .67), when compared with the parents' version (.83), (Zhou et al., 2003).

An adaptation was made for the use of this scale with pre-school children – namely, the use of a visual Likert scale using either squares or animals (from the smallest to the largest) as an aid (and facilitator of the children's response).

*Guilt and emotion regulation – self-report (Social-Emotional Responding Task; SERT, Malti, 2017; Malti et al., 2009).*

The task was administered individually in a quiet, well-equipped space and involved six illustrated vignettes depicting moral transgressions by the child towards others (e.g., pushing to get ahead in line, stealing a bar of chocolate). The child's task is to give a socio-emotional response to each of these vignettes and the situations presented, indicating If they would feel bad (or not), if they were in the place of the child who committed the transgression represented (How would you feel bad you had done this?). If the answer was “yes”, you would ask “You said you would feel bad. How strongly would you feel bad?” on a scale of 2 to 5, using a visual Likert scale (2 being a little and 5 being very much). The authors Colasante & Malti (2017) also registered their score when this emotion was present (2 to 5) and absence (“no” – 1). The subscales ethical guilt, non-ethical guilt and absence of guilt are assessed using this first task.

Additionally, SERT measures through descriptives items the subscales of emotion regulation (16 items, self-report), sympathy for the other (4 items), and sympathy for oneself (5 items). Respective Cronbach's  $\alpha$  values regarding the current sample were: .65 (healthy guilt subscale); .72 (ethical guilt); .75 (non-ethical guilt); .57 (absence of guilt); .84 (emotion regulation subscale); .58 (sympathy for oneself), and finally .51 for the scale that revealed the lowest internal consistency, sympathy for others. Although the original version of the SERT does not yet have reported internal consistency measurements, the task-associated scale and its results suggest that the SERT is a robust tool for assessing children's socio-emotional abilities (Malti et al., 2021).

Although SERT was previously used with pre-school children who have not yet acquired reading and writing skills (4- to 6- years old; e.g., Malti et al., 2021; Yavuz et al., 2022), in this first Portuguese version, it was important to reaffirm the adaptation the adaptation made for its use for such young samples – namely, the use of a visual Likert scale as an aid (and facilitator of the

children's response). This adaptation proved especially useful during remote administration via Zoom, as well.

### **Data analyses.**

Statistical procedures will consist of a descriptive analysis of the variables, the internal consistency and reliability of the study scales, and significant differences found regarding control variables. Exclusion criteria, outliers and multivariate outliers (Mahalanobis Distance) were analyzed. Convergence between different reports and criteria for the subsequent mediation models (Hayes, 2017) were tested. Finally, correlations and mediation models (indirect effect) were tested while controlling for age (in months) and moral development (both variables statistically and theoretically relevant covariates). To carry out these analyses, the IBM Statistical Package for the Social Sciences (SPSS, version 28) and its complement for structural equation models - PROCESS macro (version 3.5) were used. Regarding the mediation models, its power analyses were performed using the Monte Carlo Power Analysis for Indirect Effects Simulation.

## **Results**

As previous analyses have shown, only the variable regulation of happiness (S2) revealed poor internal consistency, and for that reason, was excluded from further statistical analyses. No significant outliers were identified regarding attachment security, emotion regulation and the several dependent variables hypothesized.

Further understanding and characterization of the studied variables can be seen in the *Appendix I. Descriptive Analyses*. Means and standard deviation values were as expected for the constructs measured. The only elevated value noteworthy was the mean regarding the participating children's verbal IQ ( $M= 121.55$ ,  $SD= 13.61$ , in comparison with normative value, 100). Despite this, no significant correlations were found regarding the verbal IQ and the several models variables studied. No differences were found when comparing the attachment security results obtained by video in the school context ( $M=4.07$ ,  $SD= 0.02$ ) or not (zoom, home, consultation room,  $M=3.33$ ,  $SD= 0.26$ ),  $t(73)=1.40$ ,  $p>.05$ . Girls were found to be more secure in their attachment relationships [ $M_{\text{♀}}=4.38$ ;  $M_{\text{♂}}=3.64$ ;  $t(74)=2.69$ ,  $p<.01$ ]. Children's age in months showed a significant positive correlation with emotion regulation (self-report, S2,  $r= 0.24$ ,  $p<0.05$ ).

While controlling for statistically relevant socio-demographic variables (e.g., age, gender verbal IQ, considering the previous differences found and presented) convergence analyses

regarding emotion regulation and sympathy were performed. Emotion regulation ( $r = .28, p < .05$ ), lability ( $r = .21$ , only marginally significant,  $p < .1$ ) isolation ( $r = .26, p < .05$ ) and aggressiveness ( $r = .42, p < .00$ ) showed an overall convergence between the parents and teachers reports. Emotion regulation self-reported by the children (S2) was divergent from parents' ( $r = -.21, p > .05$ ) and teachers' reports ( $r = -.12, p > .05$ ). However, both adults' reports weren't convergent between themselves regarding social competence ( $r = .13, p > .05$ ). The divergences identified in these records prevented the possibility of creating a combined variable for the constructs measured by various records, namely emotion regulation and sympathy for others, in subsequent analyses.

Parents report on their children sympathy was divergent with children's self-report (S2, Eisenberg's scale – that is, sympathy for others;  $r = -.28, p > .05$ ); with sympathy for others (SERT, S2,  $r = -.004, p > .05$ ); and with sympathy for self ( $r = .08, p > .05$ ). Children's self-report on their sympathy (Eisenberg) and sympathy for others ( $r = .46, p < .001$ ); sympathy (Eisenberg) and sympathy for self ( $r = .41, p < .001$ ) were convergent throughout data collection.

Table 2. Convergence analyses for multi-reported variables (emotion regulation and sympathy).

<i>Sympathy for others measures</i>	<i>Parent's report</i>	<i>Children's reports (Eisenberg's &amp; SERT)<sup>a</sup></i>	
Parent's report	-	-.28 and -.00	
Children's reports <sup>a</sup>	-.28 and -.00	.46 <sup>***</sup>	
<i>Emotion regulation measures</i>	<i>Parent's report</i>	<i>Teacher's reports</i>	<i>Children's reports</i>
Parent's report	-	.28	-.21
Teacher's reports	.28	-	-.12,
Children's reports	-.21		-

a - children's self-reports included two measures: by the Eisenberg scale, and SERT

### Assessment of the three criteria for mediation (Hayes, 2017):

(1) *The independent variable (attachment) impacts the mediator variable (emotion regulation, in its several reports – self, parents' and teachers').*

Both parents' and teachers' report on emotion regulation and lability (ERC), as a mediator, didn't fulfil this criterion. Hence, subsequent analyses excluded reports of emotion regulation provided by adults. Self-reported emotion regulation during the last data collection of the study (S2), showed this criterion [ $Z(1)=8.46, p < .01, R^2=0.11$ ].

(2) *The mediator variable (emotion regulation) should affect/ predict the dependent variable.*

Only sympathy reported by parents [ $Z(1)=0.06, p>.05, R^2=.00$ ] and the absence of guilt [ $Z(1)=0.02, p>.05, R^2=.00$ ] didn't fulfil this criterion. Consequently, these variables were excluded from subsequent analyses as well.

(3) *By controlling the effect of mediator variable (emotion regulation), the relation between the independent (attachment) and the dependent (sympathy and guilt) variables should become weaker or even un-existent.*

All the variables that fulfilled the previous criterion (2), fulfilled this last criterion (3), all revealing non-existent correlation when controlling for Emotion regulation (S2). In sum, the dependent variables that fulfilled all three criteria for performing a mediation model were: Sympathy for oneself; Sympathy for others; Sympathy (Eisenberg's scale); Healthy guilt; Ethical and non-ethical guilt (all, also collected during S2).

Table 3. *Analyses of the several regression models, when controlling and including emotion regulation (S2) as a predictor.*

Regression Model	Dependent variable	<i>d</i>	<i>Z</i>	<i>p-value</i> (model)	$R^2$	$\beta$ attachment	<i>T</i>	<i>p-value</i> ( $\beta$ )
1.	Sympathy for oneself	2	33.79	<.001	.49	.12	1.943	.06
2.	Sympathy for others	2	3.76	.01	.10	.04	0.462	.65
3.	Sympathy <sup>a</sup>	2	7.02	.00	.17	-.11	-1.413	.16
4.	Healthy Guilt	2	7.82	<.001	.18	.00	0.033	.97
5.	Ethical Guilt	2	3.82	.03	.10	-.13	-1.018	.31
6.	Non-ethical guilt	2	3.15	.05	.08	-.15	-1.207	.23

Note: all models controlled for emotion regulation (S2) and with attachment security as an independent variable;

a. Sympathy collected through the Eisenberg's scale.

### Mediation models analysis

The following explanatory models were tested regarding the obtained levels of the self-reported sympathy and guilt domains. Regarding the effect of attachment security and the implied mediation of emotion regulation on these outcomes, the following covariates were considered: age and moral development (following established guidelines concerning developmental, socio-emotional, and moral psychological trajectories and processes).

*Model 1: attachment security predicts sympathy for oneself, mediated by emotion regulation.*

Our results showed the model was significant, and as such, that attachment security significantly accounted for the sympathy for oneself [ $F(4, 67) = 17.28, p < .001; R^2 = .51$ ; non-significant direct effect:  $\beta = .11, SE = .07, t = 1.61, p < .05$ ], while mediated by emotion regulation (significant indirect effect:  $\beta = .13, CI = .03 - .26$ ), and controlled for the child's age and the child's morality. The model explained 50.78% of the variance found in self-reported sympathy for oneself and revealed a good power of .77.

*Model 2: attachment security predicts sympathy for others, mediated by emotion regulation.*

Our results showed the model was significant, and as such, that attachment security significantly accounted for the sympathy for others [ $F(4,67) = 4.22, p < .01; R^2 = .20$ ; non-significant direct effect:  $\beta = .01, SE = .09, t = 0.11, p > .05$ ], but also with a non-significant indirect effect ( $\beta = .05, CI = -.02 - .12$ ), and controlled for the child's age in months and the child's morality. The model explained only 20.13% of the variance found in children's self-reported sympathy for others and revealed a poor power of .34.

*Model 3: attachment security predicts sympathy (Eisenberg's scale), mediated by emotion regulation.*

Our results showed the model was significant, and as such, that attachment security significantly accounted for the sympathy [ $F(4,67) = 4.36, p < .01; R^2 = .21$ ; non-significant direct effect:  $\beta = -.14, SE = .08, t = -1.73; p > .05$  – yet, it was marginally significant,  $< .1$ ], while mediated by emotion regulation (significant indirect effect:  $\beta = .09, CI = .02 - 0.18$ ), and controlled for the child's age in months and the child's morality. The model explained only 20.66% of the variance found self-reported sympathy (Eisenberg's scale) and revealed a good power of .71.

*Model 4: attachment security predicts healthy guilt, mediated by emotion regulation.*

Our results showed the model was significant, and as such, that the children's attachment security accounted for their development of healthy guilt [ $F(4, 68) = 4.79, p < 0.01; R^2 = .22$ ; non-significant direct effect:  $\beta = -.03, SE = .10, t = -0.30, p > .05$ ], while mediated by emotion regulation (significant indirect effect:  $\beta = .10, CI = .02 - .21$ ), and controlled for the child's age and the child's morality. The model explained only 22.22% of the variance found in the children's self-reported healthy guilt and revealed a good power of .69.

*Model 5: attachment security predicts ethical guilt, mediated by emotion regulation.*

Our results showed the model was significant, and as such, that the children's attachment security accounted for their development of ethical guilt [ $F(3, 68) = 3.10, p < .05; R^2 = .12$ ; non-significant direct effect:  $\beta = -.17, SE = .13, t = -1.38, p > .05$ ], while mediated by emotion regulation (significant indirect effect:  $\beta = .09, CI = .003 - .199$ ), and controlled for the child's age in months and the child's morality. The model explained only 12.02% of the variance found in the children's self-reported ethical guilt and revealed a poor power of .43.

*Model 6: attachment security predicts non-ethical guilt, mediated by emotion regulation.*

Our results showed the model was significant, and as such, that the children's attachment security accounted for their development of non-ethical guilt [ $F(4,67) = 2.95, p < .05; R^2 = .15$ ; non-significant direct effect:  $\beta = -.18, SE = .12, t = -1.46, p > .05$ ], while mediated by emotion regulation (significant indirect effect:  $\beta = .07, CI = .003 - .163$ ) and controlled for child's age and child's morality. The model explained only 14.98% of the variance found in the children's self-reported non-ethical guilt and revealed a poor power of .35.

Regarding potential associations with social behavior, sympathy and guilt showed consistent significant negative correlations with isolation [ $r = -.27$  to  $-.33, p < .05$ ], correlations with aggression and pro-social behaviors were not significant.

## Discussion

The present research evidenced the effect that primary relationships can have on children's socio-emotional development and even moral development. An overall effect on children's adaptive trajectories, including levels of sympathy and healthy guilt, was empirically confirmed. Depending on the level of implicit security in their attachment relationships, children obtained higher scores in various adaptive and healthy domains of sympathy and guilt. This effect was only observed when mediated by the child's emotion regulation skills. In short, children could benefit the most from their attachment security when they had good emotion regulation skills. Only then were the respective positive explanatory models significant, except for sympathy for others. This confirmation was consistent with previous studies connecting attachment to socioemotional development outcomes, which have also included samples of Portuguese children (i.e., Fernandes et al., 2019a; 2019b).

As the main strengths of this study, it is possible to point out its longitudinal design, and the observational measures and tasks used (e.g., ASCT, SERT), particularly given the young age of the participating children. The models gained expression when the mediating and dependent variables were measured at the same time (S2). In essence, attachment security was considered an implicit and consistent precondition, but emotion regulation as a necessarily developed ability for the attachment effect to be observable and significant and prevent the possible contamination by unrelated processes of dysregulation.

Precisely because it poses many challenges, research on attachment and on socio-emotional or moral development on pre-school children with direct self-reported measures is scarce. These findings represent an opportunity to fill this current gap in the literature. This study also provides the opportunity to compare the effect of attachment on both self-conscious moral emotions (guilt) and other-conscious moral emotions (sympathy).

The most salient limitation associated with the present research is its modest sample size and median to poor internal consistency of the SERT. Nevertheless, some authors (Hair et al., 2010, 2014; Nunnally & Bernstein, 1994) consider results around  $\alpha=0.6$  understandable if the scale comprises a limited number of items and is in its initial phase of administration and subsequent analysis. Nevertheless, future studies and further adaptations of SERT should take these limitations into account to ensure the avoidance of biased results and of effects only observable in an unclear, ambiguous manner.

By analyzing the limitations of the various models, we found that, in particular, the model for sympathy for others was not mediated by emotion regulation, despite the total effect being significant. Additionally, the sympathy model (measured by the Eisenberg scale) exhibited a marginally significant indirect effect ( $p<.1$ ), suggesting partial mediation, in contrast to the other models where mediation was full. As an internal psychological tool and mechanism as well, the power of mediation of emotion regulation, according to these results, seems to be more prominent particularly in regards to moral emotions oriented towards the self (guilt and sympathy for the self), and not to have the same effect when they are oriented towards the other (sympathy for the other). It should be added that even though the direct effects between attachment and the socio-emotional outcomes tested were not significant (as expected regarding complete mediations), they were not uniformly positive across all the variables studied (more particularly in relation to the sympathy variable, as measured by the Eisenberg scale, and the domains of guilt assessed). In spite of being partially consistent with previous findings (Mango, 2024; Murphy et al., 2015), these results point to the complexity of the concepts studied, and the implied inconsistency also found in the previous

results in the literature (the effect is not always congruent nor significant, Costa Martins et al., 2021), highlighting the need for further empirical research that addresses them in a similar way, or that addresses other potential co-variables and even other mediators.

In addition to considering other potential co-variables and mediators, future studies could also approach other independent variables (related to parent-child relationships, i.e., warmth), and even other moral emotions as the socioemotional outcome under study (i.e., empathy, compassion, shame). A more diverse, broader and larger sample is recommended to enable more robust models and statistical analyses and avoid possible effects from a nested sample. Furthermore, the analysis of the power of the effects found in the various models was inconsistent, with some models showing strong effects and others showing weak effects. This reinforces the idea of increasing the sample size in future studies to avoid undetected effects. It is also recommended to explore aspects related to attachment insecurity, and lability (the present sample lacks self-report regarding lability, and parents' and teachers' reports didn't reveal the necessary criteria to perform mediation models, nor did it constitute a focus of the present study). Although similar, current findings might point to greater significance of attachment quality's effect on self-oriented emotions (guilt). However, further research into other self-conscious (e.g., shame) or other-conscious (e.g., pity) moral emotions is still needed.

In short, one of the reasons that absence of guilt might not show the expected negative effect from attachment security in the present study could be related to the fact that it might not be a question of looking at whether guilt is present or absent, but rather if it is deregulated. The instrument used (SERT, Malti, 2017; Malti et al., 2009) only measures adaptive expressions and levels of guilt, so such analysis was not yet possible in this research. It would be interesting for future studies to investigate whether lower levels of attachment security, in the presence of lability, would show psychological distress, or signs of dysregulated sympathy and guilt (measured from a more clinical perspective). With such context in mind, addressing negative moral emotions such as contempt and disgust would also be important.

Lastly, when considering such a model, it is important to note that emotional lability is an opposite variable to emotion regulation (Fernandes et al., 2024). Just as emotion regulation can enhance the positive relationship between attachment and moral emotions, emotional lability can be associated with emotionally dysregulated expressions of sympathy and guilt.

In essence, security in the attachment relationship can ensure (although not directly, and for this reason, the effect is not always observed) positive outcomes, but it can have preventive

characteristics for more negative developmental trajectories. For this reason, in the current findings both sympathy and guilt weren't correlated with prosocial tendencies (and as such, the last hypothesis was only partially confirmed as well) but were negatively correlated with the internalization and isolation of the child. Overall, these moral emotions, when dysregulated, might lead to more inhibitory and isolated trajectories for the child.

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**Appendix I: Descriptive Analyses**

Parents and teacher's report	Minimum	Maximum	Mean	Standard Deviation
Lability (parents' report, PR)	1.33	2.47	1.87	0.29
Emotion Regulation (PR)	2.63	4.00	3.50	0.34
Externalization/aggression (PR)	1.10	3.50	2.21	0.58
Internalization/isolation (PR)	1.10	3.50	1.91	0.52
Social competence (PR)	3.00	5.70	4.34	0.70
Sympathy (PR)	3,60	6.00	5.20	0.66
Lability (teacher's report, TR)	1.13	2.40	1.66	0.27
Emotion Regulation (TR)	2.63	4.00	3.45	0.36
Externalization/aggression (TR)	1.00	3.50	1.60	0.49
Internalization/isolation (TR)	1.00	3.10	1.61	0.44
Social competence (TR)	2.20	5.70	4.06	0.90
Children's variables and self-report	Minimum	Maximum	Mean	Standard Deviation
Attachment security (Bretherhon's)	1	6	4.04	1.23
Verbal IQ	87	153	121.55	13.61
Healthy Guilt (Session 2)	1.00	5.00	3.62	1.05
Sympathy for oneself (S2)	1.40	5.00	3.62	0.86
Sympathy for others (S2)	1.00	5.00	3.76	0.93
Sympathy (Eisenberg's), (S2)	1.50	5.00	3.92	0.84
Emotion Regulation (S2)	1.25	4.69	3.34	0.83
Ethical guilt (S2)	1.00	5.00	3.21	1.28
Non-ethical guilt (S2)	1.00	5.00	3.10	1.24
Absence of guilt (S2)	1.00	5.00	2.92	1.17

**Chapter V: Respect and sympathy in Portuguese preschoolers and middle-school children**

Chapter based on:

Costa Martins, M., Martins Cardoso, E., Pires, E., Fernandes, M., Fernandes, C., Malti, T., & Veríssimo, M. (2024). Respect and sympathy in Portuguese preschoolers and middle-school children. *Análise Psicológica*, 42 (1), 93-105.  
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### Abstract

Recent research has revealed theoretical and empirical links between respect and socioemotional outcomes such as moral emotions and prosociality, as well as negative associations with aggression. The ability to sympathize, feel concern, and be aware of others' states has also been hypothesized to influence how children conceptualize respect and evaluate behaviors as worthy of respect. The development of respect derives from the ability to recognize others as individuals with unique needs, feelings, and desires. Similarly, sympathy has also been associated with more altruistic and kinder interactions. The present study aims to explore the link between these two socioemotional constructs - respect and sympathy - while considering possible cultural nuances. Fifty-three children answered the Respect Interview which delved into their conceptualizations, evaluations, and reasonings behind respect (the concept, expressions, and examples of feeling respect from others), and the Sympathy Scale. Parents also reported on their children's sympathy and sociodemographic data. A positive effect between sympathy and respect was only partially confirmed. Sympathy revealed a positive effect on prosocial conceptualizations of respect ( $X^2 = 3.85, p < .05; b = .90$ ). In contrast, children who used authority themes to define expressions of respect, were less sympathetic ( $t(51) = -1.86, p < .05$ ). Sociodemographic differences were considered and discussed when analyzing both variables. These results are in line with previous literature and contribute to knowledge in this field by replicating the study in a different culture and age range.

**Keywords:** Respect, Sympathy, Moral emotions, Socio-emotional development.

## **Respeito e simpatia em crianças portuguesas do pré-escolar e do 1º ciclo do ensino básico.**

### **Resumo.**

Investigações recentes têm revelado ligações teóricas e empíricas entre o respeito e aspetos socio-emocionais, tais como as emoções morais, a pró-socialidade, bem como, associações negativas com a agressão. A capacidade de simpatizar, de sentir preocupação e de estar consciente das circunstâncias e dos estados do outro, também tem sido considerada um potencial influenciador na forma como as crianças conceptualizam o respeito e avaliam os comportamentos enquanto dignos de respeito. O desenvolvimento do respeito deriva da capacidade de reconhecer o outro como indivíduo com necessidades, sentimentos e desejos únicos. Do mesmo modo, tal como o respeito, a simpatia também tem sido associada a interações mais altruístas e mais amáveis. O presente estudo tem como objetivo explorar a ligação entre estes dois construtos socio-emocionais – respeito e simpatia – tendo em conta possíveis nuances culturais. Cinquenta e três crianças responderam à Entrevista sobre o Respeito, que se debruçava sobre as suas conceptualizações, avaliações e raciocínios subjacentes ao respeito (o conceito, as expressões e os exemplos de sentimentos de respeito por parte dos outros), e à Escala de Simpatia. Os pais também reportaram sobre a simpatia e os dados sociodemográficos dos seus filhos. O efeito positivo entre a simpatia e o respeito só foi parcialmente confirmado. A simpatia revelou um efeito positivo nas conceptualizações pró-sociais do respeito ( $X^2 = 3,85, p < .05; b = .90$ ). Em contrapartida, as crianças que utilizaram temas de autoridade para definir expressões de respeito foram menos simpáticas ( $t(51) = -1,86, p < .05$ ). As diferenças sociodemográficas foram consideradas e discutidas aquando da análise de ambas as variáveis. Os nossos resultados estão de acordo com a literatura anterior e contribuem para o conhecimento neste domínio ao replicar o estudo numa cultura e numa faixa etária diferentes.

**Palavras-chave:** respeito, simpatia, emoções morais, desenvolvimento socio-emocional.

*“Act in such a way that you treat humanity, whether in your own person or in the person of any other, always at the same time as an end, never merely as a means.”*

Kant (1785), *Groundwork for the Metaphysics of Morals*

### **Introduction**

Respecting others is one of the most powerful ingredients for creating and nurturing fair individuals and, consequently, just societies (Ignatieff, 2017; Lawrence-Lightfoot, 2000; Murdoch, 1970). Feelings, expressions, and behaviors of respect entail an appreciation of the other person, acknowledging their individuality and feelings (Kalkavage, 2001). Consequently, respect plays an important role as a moral emotion for socioemotional development and in shaping our moral orientations (Malti et al, 2020; Turiel & Killen, 2010).

Morality and respect are intertwined in both philosophical and psychological literature. Kant (1785/2012) emphasized respect as a subject of study, describing it as an emotion that fosters morality and establishing three domains: (1) respect for the moral law; (2) respect for a person’s exceptional character; and (3) respect for a person as such – as a human being. Subsequently, these latter two definitions requested a broader distinction between respecting someone for their merits and considering their social position (Drummond, 2006). In psychological literature, Piaget’s theory serves as an important framework for understanding moral development. Piaget stated that children develop from a heteronomous morality, which relies on the authority of others, to a more autonomous morality. This transition occurs through children’s reciprocal interactions with adults and peers, particularly in contexts involving social problems, conflicts, and challenges, leading them to attain a heteronomous morality (Piaget, 1932). During childhood, peer relationships provide the context to establish relations marked by reciprocity that contribute to the transition toward more autonomous thinking. This transition involves the cultivation of mutual respect and concerns regarding fairness, justice, and cooperation (Turiel, 2014). From an early age, children show moral concerns and display moral issues related to relationships and family dynamics (Nucci, 2014; Smetana et al., 2014), harm (e.g, Tisak et al., 2006), justice and rights (Helwig et al., 2014). The foundations for moral and social reasoning, including the analysis of existing social conditions and even opposition to those conditions, are also present in childhood (Turiel, 2014).

### **Development of respect**

Respecting others implies caring, paying attention, and being conscious of others (i.e., an apprehensive component), but also implies cognitive factors directed at appreciating others deemed worthy of, and reasonings for that appreciation (i.e., a responsive component) (Malti, 2020).

According to Buss (1999) respect is primarily an emotional response (i.e., affective component) that might include cognitive judgments regarding how worthy someone is (i.e., cognitive component) of being treated in a certain way (i.e., motivational component). Furthermore, expressions or behaviors of respect may be explicit, such as intentionally showing kindness to others (e.g., by sharing fairly with everyone and helping another person), or implicit, involving attitudes toward others (e.g., in certain gestures and stances regarding others) (Dillon, 2007; Malti et al., 2020).

In a recent study, Malti et al., (2020) propose that the conceptualization of respect should be considered in a broader and intrapersonal way. This involves examining not only how children define and describe respect (i.e., respect conception) but also how they express respect toward others (i.e., expressions of respect) and perceive being respected by others (i.e., respect from others), which naturally occur within interpersonal relationships (Malti et al., 2020). To explore children's conceptualization of respect, Malti and colleagues proposed six main categories: fairness, prosocial, social convention, authority, merit, and personal freedom. The results of the study revealed that children start to conceptualize respect by evoking mainly themes of pro-sociality (i.e., other-oriented behaviors such as helping, giving, sharing, and displaying kind actions or emotions). Subsequently, they develop an understanding of respect based on fairness, which encompasses concepts of justice, equality, and reciprocity. Furthermore, children perceive behaviors reflecting fairness or kindness as worthier of respect compared to those based on merit or performance (Malti et al., 2020).

### **Relations between respect and sympathy**

In the developmental socioemotional literature, respect and sympathy are described as other-oriented emotions, although they differ in their emotional valence (e.g., Malti et al., 2018; Malti et al., 2020). Sympathy has a negative valence and emphasizes the aversive aspects of a situation (e.g., seeing someone getting hurt or bullied). Contrarily, respect has positive emotional valence, evoking positive feelings that resonate with an individual's ethical concerns (e.g. when someone shares with or helps those in need) (Malti & Latzko, 2017; Malti et al., 2018).

Sympathy can be defined as a kind or compassionate gesture that generates a sense of protection and acceptance, serving as an enabler in communication with others, while tending not to give plateau to feelings of fear, doubt, and insecurity (Piero, 1971/2006). It can be characterized by feelings of concern, sadness, or pity for another and implies awareness and recognition of another's emotional or situational state (Eisenberg, 1986; Eisenberg et al., 1996), along with a desire to relieve the other person's negative emotions (Eisenberg et al., 1991). Sympathy is often misread

with empathy; however, sympathy involves more than sharing the emotional state of the other, always resulting in a concern for the other person (Colasante & Malti, 2017; Eisenberg, 2000; Eisenberg, 2018; Moll et al., 2008). Sympathy tends to direct the child's attention to the consequences of their actions and the well-being of others and may assume an empathic experience of sharing the other person's feelings. Additionally, sympathy is empirically related to more altruistic forms of prosocial behaviors (Costa Martins et al., 2022; Eisenberg & Miller, 1987; Malti et al., 2009).

Previous studies have demonstrated that respect is associated with kindness, prosocial behavior and positive social outcomes (e.g., Cohen, et al., 2006; Hsueh et al., 2005; Huo & Binning, 2008; Langdon & Preble, 2008; Mayselless & Scharf, 2011). Empathy and sympathy can be considered the foundation for more complex other-oriented emotions, such as feelings of respect for others. Valuing someone as truly good motivates us to act kindly, thereby fulfilling our expectations, intentions, and desires (Drummond, 2022). Acknowledging the other as a different entity creates a moral space in which respect can develop (Drummond 2006).

Malti et al. (2020) in a study involving an ethnically mixed sample of children and adolescents (5 and 15 years old), found that respect, specifically when based on fairness (regarding social circumstances of sharing fairly and social inclusion) was positively related to sympathy. However, sympathy was not a significant predictor of respect conceptualizations. Other studies have also founded a positive association between child's sympathy and respect for moral others (Zuffianò et al. 2015), as well as between respect and prosocial behavior (Lim et al., 2020; Kuryluk, et al., 2011). In contrast, some studies have revealed negative associations between respect and aggression (Peplak & Malti, 2017), specifically overt aggression and relational aggression (Kuryluk et al., 2011).

### **Aim and hypotheses of the study.**

Even though respect is a universal construct present across history and cultures, there is still evidence of some cultural variability in children's evaluation and understanding of the concept. For instance, differences were found between American and Chinese samples of children regarding the motives behind respect (with the first one focusing more on obedience to adults, and the second one more on admiration) however both samples suggested reciprocity as a motive for respect (Hsueh at al., 2005). Further research is needed to provide a deeper understanding of the impact that implicit cultural norms have on children's developing notion of respect. Therefore, replications of previous studies and findings using samples from different cultures are important.

The aim of the present study is to replicate Malti's study and first evaluate the notions of respect expressed by Portuguese children, and secondly, examine its relationship with sympathy. Specifically, we aim to examine 1) possible age-related differences in the associations between respect and sympathy, 2) if girls are perceived as more sympathetic and more ethical in their respect conceptualizations, 3) if children who conceptualize respect using ethical themes (justice, pro-sociality, and personal freedom) are more sympathetic compared to those who don't use those themes.

## Method

### Participants.

The present study included 53 children, 28 females (52.8%) and 25 males (47.2%), aged between 5 and 8 years (56 to 110 months old,  $M=84.53$  months;  $SD=15.50$ ). Children were mostly Portuguese (93%), 60.4% were firstborns and 75.5% had at least one sibling. Parents, mostly mothers (85%) also participated. The maternal average age ranged from 29 to 49 years ( $M=38.25$ ;  $SD=5.01$ ); and the paternal average age ranged from 30 to 64 years ( $M=41.20$ ;  $SD=7.50$ ). Most parents lived together, 61.5% were married; 19.2% cohabited and 13.5% of the families were separated or divorced, 5.8% were in another situation (ex. widow). Parents worked mostly full-time (82.7% and 92.5%, mothers and fathers respectively), 11.5% of the mothers and 5.7% of the fathers worked part-time jobs, and 5.8% of the mothers and 1.9% of the fathers were unemployed. Most mothers and fathers had higher education with at least bachelor's degree (72.5% and 69.2% respectively).

The inclusion criteria were families that were fluent in Portuguese and had a child aged between 5 to 8 years old. Children who revealed significant difficulty or a lack of verbal understanding during the interviews were not included in the analysis (however considering this criterion and considering language barriers with bilingual children or with different Portuguese accents, no children was excluded).

### Measures.

#### *Sociodemographic Questionnaire.*

The sociodemographic questionnaire was designed to describe key characteristics of the sample, including child's sex, age, school year, number of siblings, whether they were the firstborn, and the number of hours spent in school each week. Additionally, it gathered information on the mothers' and fathers' levels of education and their professional situations.

*Respect interview (Malti, 2020; Malti & Ongley, 2014).*

This interview aims to characterize the behaviors children consider to be respectful. The script used in the present study was developed by Malti et al. (2020) and translated into Portuguese by the research team. The first part of the interview is dedicated to the children's conceptions of respect, using three open-ended questions. The first question evaluates the general understanding of respect (i.e., the concept of respect: "What does it mean to feel respect for someone?"). The following questions address how children show respect to others (i.e., expression of respect: "Tell me about a time when you respected someone"). The final question evaluates how children perceived being respected by others (i.e., respect from others: "Tell me about a time/situation when someone respected you.").

The responses were classified using the coding system for conceptions of respect developed by Malti et al. (2020), composed of seven categories. A maximum of three categories were coded for each child. These seven categories included: (1) fairness (i.e., responses including the Golden Rule, impartial treatment, and respect for the rights of others); (2) prosociality (i.e., other-oriented themes such as engaging in sharing or empathy); (3) social convention (i.e., responses based on following socially defined rules and regulations, namely the use of good manners); (4) merit (i.e., themes focused on achievement or success); (5) authority (i.e., responses related to obedience to avoid punishment and regarding orders from authority figures – parents, teachers or others); and (6) personal freedom (i.e., themes of autonomy and management/agency, i.e., themes related to preserving choice and personal space). Additionally, the categories "other answers" and "rudimentary/not elaborated answers" were included. Three researchers independently coded a portion of the data (25% of the data) and inter-coder agreement was obtained using Cohen's  $\kappa$  was 1 (100%).

The final part of the interview evaluates children's concept of respect as well as the reasons associated with feelings of respect in three social circumstances (Malti, 2020; Malti & Ongley, 2014). These narratives present peers involved in hypothetical behaviors worthy of respect, specifically stories involving themes of "social inclusion", "fair sharing" (i.e., sharing resources equally), and "good school performance". The final context/story regarding school performance allowed us to assess differences in children's ethical and unethical evaluations of respect and served as a comparison condition for the other scenarios.

After listening to each story, participants were firstly asked to report how much respect they felt for the protagonist, using a 4-point Likert scale (from 1 "no respect", to 4 "a lot of respect"). Secondly, children were asked to justify the amount of respect they felt for the

protagonist. Regarding 5-year-old and 6-year-old participants, a corresponding visual scale depicting animals of increasing size (i.e., mouse, dog, horse, and elephant) was presented to ensure their understanding. Finally, regarding each story, the participant's reasoning behind their previously evaluated respect were coded with the 7 categories used to analyze respect conceptions.

*Sympathy Scale (children report and parents report), original from Eisenberg et al., 1996.*

The sympathy scale for children consists of six statements (e.g. "I often feel sorry for other children who are sad or in trouble"). After each statement, children were asked whether the sentence described them (or not) and, if so, how strongly. Responses were rated on a scale of 1 to 3, with 1 "This is not like me", 2 "This is sort of like me", and 3 "This is really like me". The Cronbach's  $\alpha$  of the original scale was .80, indicating good internal consistency. However, in the present sample, a Cronbach's  $\alpha$  of only .41 was obtained. The parent version of the sympathy scale includes 5 of the 6 items from the children's version, using a Likert scale format ranging from 1 to 6 (1 being "it's not at all like my child/my child" and 6 representing "it's really like my child"). In the present sample, this scale revealed a Cronbach's  $\alpha$  of .76. Due to the different internal consistency values obtained by the child version, only the parents' version of the sympathy scale was used in our analysis.

### **Procedures.**

This study was conducted following the ethical standards outlined by the American Psychological Association (APA) and was approved by the Ethics Committee of ISPA. Parents of potential participants were contacted via social media platforms (e.g., Facebook, Instagram) by the researchers, and by the official accounts of the research team. After filling out the sociodemographic questionnaire and the sympathy scale on the Qualtrics platform, parents who provided their email addresses were contacted to schedule respect interviews with their children. Since this research occurred during the pandemic (2021), interviews were mostly performed online (via the platform Zoom) after obtaining children's assent. Despite being conducted via Zoom, both parts of the respect interviews (the open-ended questions and semi-structured questions), took place in a calm environment free of interruptions. The online collection enabled a sample with Portuguese families from various parts of Portugal, and even with some families living outside the country (e.g., Brazil, London, and Spain, n=4).

## Results

Most children used one or two themes to describe their concept of respect (see Table 1). When specifically answering each domain of respect (i.e., *Respect Concept*, *Expression of Respect*, and *Respect from Others*), most children employed at least one *Ethical theme* (i.e., *Fairness*, *Prosocial* or *Personal Freedom*). Specifically, 34.0% used it in all domains, 37.7% in two domains, 11.3% in one domain, and 17.0% did not use it in any domain. Regarding children's respect evaluation and associated reasoning in the three social contexts (i.e., *Social Inclusion*, *Sharing Fairly*, and *Academic Achievement*) *Ethical themes* were the most used except for the academic-related goals (see Table 1). Children predominantly exclusively used *Ethical themes* when addressing *Respect from Others*, *Social Inclusion* and *Sharing Fairly* (see Table 1).

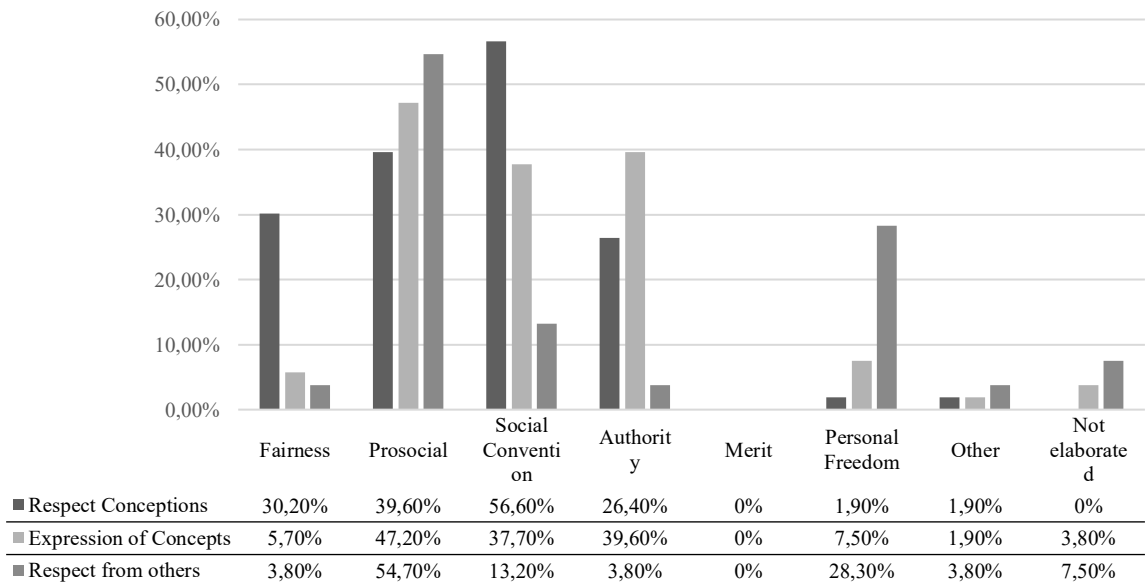
Table 1. Percentage of children by number and type of themes used to describe respect, organized by domains.

		Number of themes			Themes Type				
		1	2	3	<i>Exclusively ethic</i>	<i>Mixed</i>	<i>Exclusively non-ethic</i>	<i>Other</i>	<i>Not elaborated</i>
Respect	Respect Concept	47.1	49.1	3.8	32.1	28.3	39.6	0.0	0.0
conceptualization	Expression of Respect	66.0	24.5	9.5	28.3	22.6	45.3	0.0	3.8
domains	Respect from Others	84.9	15.1	0.0	73.6	3.8	13.2	1.9	7.6
Respect	Social Inclusion	96.2	3.8	0.0	86.8	0.0	3.8	3.8	5.7
Reasonings, by	Sharing Fairly	67.9	32.1	0.0	90.6	1.9	0.0	5.7	1.9
social context	Academic achievement	86.8	13.2	0.0	1.9	7.6	84.9	1.9	3.8

Note. *Mixed*: used both *ethic* and *non-ethic* themes

The most frequently mentioned themes for *Respect Concept* were *Social Convention* (56.6%), *Prosocial* (39.6%), *Fairness* (30.2%), and *Authority* (26.4%). For *Expressing Respect*, the most common themes were *Prosocial* (47.2%), *Authority* (39.6%), and *Social Convention* (37.7%). Regarding *Respect from Others* the most mentioned categories were *Prosocial* (54.7%), *Personal Freedom* (28.3%), and *Social Convention* (13.2%) (see Figure 1). Girls used the *Social Convention* theme more frequently in the *Expression of Respect* domain compared to boys ( $\chi^2(1) = 6.33, p < .01$ ; girls = 53.6% and boys = 20%). Firstborns mentioned *Fairness* more often than not-firstborns when describing the *Respect Concept* ( $\chi^2(1) = 4.17, p < .05$ ; 40.6% of the firstborns and 14.3% of the not-firstborns). There was an association between child age and the use of *Prosocial* themes as an *Expression of Respect*, with older children using prosocial themes more frequently ( $r_{pb} = .29, 95\% \text{ BC a CI } [.02, .52], p < .05$ ). No other significant differences or associations were found.

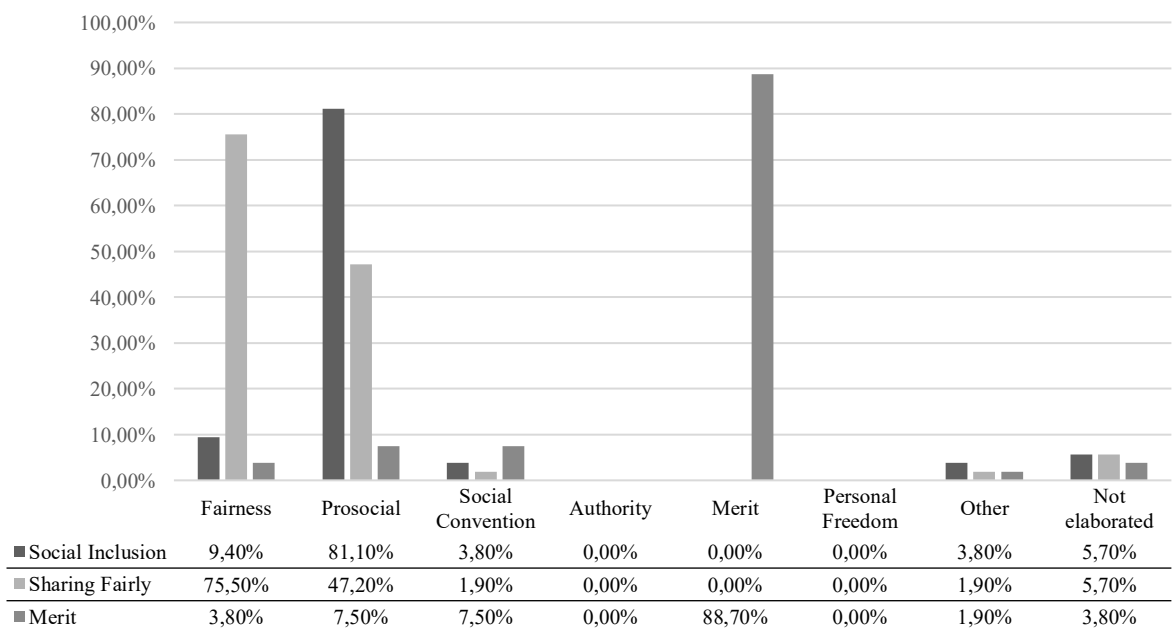
Figure 1. Percentages of answers given in each category within the three domains of respect (concept, expression and respect from others)



Note: categories are non-exclusive and can be cumulative.

Concerning children’s evaluations of respect for each story context, Figure 2 displays the percentage by theme. In the *Social Inclusion* story, the majority of children mentioned *Prosocial* (81.1%). For the *Share Fairly* story, *Fairness* was the most mentioned theme (75.5%), followed by *Prosocial* (47.2%). Finally, in the *Academic Achievement* story, the *Merit* theme was mentioned by 88.7% of the children.

Figure 2. Percentages of children’s evaluations of respect by story context.



Note: categories are non-exclusive and can be cumulative.

The present sample presented high levels of respect evaluations ( $M_{\text{sharing fairly}}=3.96$ ,  $SD=0.19$ ;  $M_{\text{social inclusion}}= 3.77$ ,  $SD=0.42$ ;  $M_{\text{academic achievement}}= 3.70$ ,  $SD=0.58$ ). However, significant differences were observed between *sharing fairly* and *social inclusion* ( $t(53)= 3.12$ ,  $p<.001$ ) and between *sharing fairly* and *academic achievement* ( $t(53)= 3.08$ ,  $p<.01$ ). Additionally, a significant correlation between *social inclusion* and *academic achievement* was found ( $r=.43$ ,  $p<.001$ ). When looking into significant differences regarding respect evaluations, boys evaluated academic achievements as worthier of respect than girls [ $t(-2.345)= 39.69$ ,  $p<.05$ ,  $M_{\text{girls}}= 3.54$ ,  $SD=0.69$ ;  $M_{\text{boys}}= 3.88$ ;  $SD=0.33$ ]. Furthermore, older children ( $\geq 7$  years old) revealed lower respect evaluations by one's achievement than younger children [ $t(49.322)= -2.91$ ,  $p<.01$ ,  $M_{\text{younger}}= 3.94$ ,  $SD=0.24$   $M_{\text{older}}= 3.58$ ,  $SD=0.65$ ]. For further description of age differences, Table 2 presents the children's respect evaluations by age group.

Table 2. Means and Standard Deviations [ $M$  ( $SD$ )] of the variable respect evaluations, by age groups.

Studied Variables	Participant's age (in years)				
	5	6	7	8	Total
Respect Evaluations (1-4)					
Sharing Fairly	3.92 (0.29)	3.93 (0.27)	4,00 (0.00)	4,00 (0.00)	3,96 (0.19)
Social Inclusion	3.67 (0.49)	3.79 (0.43)	3,90 (0.32)	3,69 (0.48)	3,77 (0.42)
Achievement	3,92 (0.20)	3.71 (0.83)	3.70 (0.48)	3.46 (0.52)	3,70 (0.58)

### Child Sympathy

Children were generally described as sympathetic by their parents ( $M=4.81$ ,  $SD=0.94$ ), with parents describing girls as more sympathetic compared to boys ( $t(51)=2.13$ ,  $p<.05$ ;  $M= 5.06$ ,  $SD= 0.87$  for girls and  $M= 4.53$ ,  $SD= 0.96$  for boys). Firstborns were described as less sympathetic compared with non-firstborns ( $t(51)=-1.70$ ,  $p<.05$ ;  $M= 4.63$ ,  $SD= 1.02$  for firstborns and  $M= 5.08$ ,  $SD= 0.77$  for non-firstborns). Children with siblings were described as more sympathetic ( $t(49)=3.55$ ,  $p<.001$ ;  $M= 5.06$ ,  $SD= 0.82$  with siblings and  $M= 4.08$ ,  $SD= 0.76$  no siblings). No other differences or correlations were found.

### Respect and sympathy

Children who answered examples of *Expressions of Respect* with an *Authority* themed response were reported by their parents to be less sympathetic ( $t(51)=-1.86$ ,  $p<.05$ ;  $M$  sympathy= 4.52,  $SD= 0.90$  for authority themed responses and  $M$  sympathy = 5.00,  $SD= 0.94$  for non-authority responses). No other difference was found.

Several logistics regressions were performed with child age, sex, siblings, and phratry, as well as sympathy as independent variables and respect conception within each domain as the dependent variable. For the conception of respect, there was a main effect of phratry on fairness (Wald  $X^2=4.18, p<.05; b=-1.71, SE=.84$ ) and sympathy on prosocial (Wald  $X^2=3.85, p<.05; b=.90, SE=.46$ ). For Expressions of respect, there was a main effect of child's age on fairness (Wald  $X^2=3.77, p<.05; b=1.57, SE=.81$ ) and on prosocial (Wald  $X^2=4.37, p<.05; b=.58, SE=.28$ ); sex on social convention (Wald  $X^2=5.71, p<.05; b=-1.86, SE=.78$ ). No other significant result was found (see Table 3).

*Table 3. Logistic regression regarding respect conceptualizations and its considered predictors.*

Respect conceptualization domain	Answered theme	Predictor	<i>B</i>	SE	Wald $X^2$	<i>P</i>
Respect Concept	Fairness	Phratry/siblings	-1.71	0.84	4.18	<.05
	Prosocial	Sympathy	0.90	0.46	3.85	<.05
Expressions of Respect	Fairness	Age	1.57	0.81	3.77	<.05
	Prosocial	Age	0.58	0.28	4.37	<.05
	Social convention	Sex	-1.86	0.78	5.71	<.05

## Discussion

Our results showed high levels of children's sympathy, a significant use of ethical themes, especially, when addressing respect from others); and behaviors of social inclusion and of sharing fairly were deemed most worthy of respect. As expected, most children employed ethical themes (i.e., fairness, prosocial or personal freedom) when addressing respect (see also, Malti et al., 2020). The incorporation of ethical themes is most evident in the motivations to respect others, but also evident in the reasons provided to be respected, and the conceptualizations of what respect entails. Our results, replicate findings presented in previous studies (e.g., Malti et al., 2020, that used a Canadian sample).

Children were expected to distinguish between respecting others' achievements and respecting their expressions of kind behaviors (i.e., social inclusion or sharing fairly), (Malti et al., 2020). Most children employed ethical themes when addressing kind behaviors but did not use them when addressing academic achievement scenarios. In our results, children considered all these types of behaviors highly respectful, with sharing equally being the most highly regarded. In

this scenario (i.e., *sharing equally*), the fairness theme was the most frequently used. In the *social inclusion* scenario, the prosocial theme was predominant, while in the academic *achievement* scenario, the merit theme was most mentioned.

Older children revealed a more ethical conceptualization across all three domains of respect (e.g., prosocial), but not when the domains were tested separately. Considering sex, our findings confirmed the hypothesis that girls are perceived as more sympathetic than boys (Kienbaum, 2014), and expected sex differences were observed in respect evaluations, with boys giving higher evaluations for academic achievements (Malti et al., 2020). However, contrary to expectations, girls didn't reveal higher ethical levels in their definition of respect. These results challenge social norms and perceptions concerning sex, suggesting that both boys and girls possess the ability to articulate and report socioemotionally and morally developed responses, rather than it being predominantly attributed to girls.

Our findings suggest that siblings play an important role regarding behaviors of sharing fairly. Older children tend to be more capable of identifying examples marked by fairness and prosociality. Furthermore, we observed a sex effect on the use of social convention with girls employing this theme more frequently when conceptualizing respect. This finding may be attributed to perceived gender roles, where girls are often perceived as more attentive to and conscious of social conventions.

Interestingly, we did not find an association between the ethical themes used by children to conceptualize respect and higher levels of sympathy. However, authority themes used when describing expressions of respect revealed a negative effect on sympathy levels. This result was expected, as authority is a non-ethical theme, which may indicate a less sympathetic attitude.

In conclusion, our findings align with previous literature on respect (Drummond, 2022; Lim et al., 2020; Kuryluk et al., 2011, Langdon & Preble, 2008). However, the observed associations were often not strong enough, which may be due to the complexity involved in conceptualizing both respect and sympathy and essentially to the novelty of this subject and of the instruments used, especially for research purposes.

It is also important to acknowledge several limitations of the current study. Firstly, the small sample size may have limited the variability of the data and the possibility of finding the remaining expected effects between variables. Additionally, the data collection procedure, conducted online during the pandemic, may have influenced children's responses, potentially emphasizing higher feeling of sympathy. Furthermore, limitations associated with the Sympathy Scale, including its low internal consistency necessitating the use of only the parent's version, as well as the potential for socially desirable responses from parents and the scale's limited number

of items, should be considered. For future research, it is essential to address these limitations. This could involve utilizing additional sources of data, such as children's self-reports and teachers' reports, to complement parental reports. Exploring different contexts, such as institutionalized children or those from varying social statuses, as well as diverse cultural backgrounds, could provide valuable insights and allow for more comprehensive comparisons.

Research on the development of moral emotions, such as respect and sympathy, during childhood remains relatively limited. There is still a lack of validated scientific measures to assess respect and sympathy, as well as a scarcity of studies conducted across diverse cultural contexts. The present research contributes to knowledge in this field, by replicating the study in a different culture setting and age range.

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**Author's disclosure:** The present study is highly inspired by and modeled by recent research by Malti et al. (2020).

**Data availability statement:** Data associated with the current study can be made available upon reasonable request to the corresponding author.

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## Chapter VI: Conclusion

*“The real danger is when the violence of the world meets the violence within a child.”*

Anna Freud & Dorothy Burlingham (1943).

## General Discussion

This dissertation constituted a comprehensive body of research that explored the associations between attachment quality, moral emotions, and prosocial behaviors and expressions. As demonstrated in the extant literature on socioemotional development and attachment (Bowlby, 1969/1982, 1973, 1980), the primary caregiver-child relationship comprises a main factor in the establishment of emotional security and trust. Furthermore, it is an instrumental relationship for shaping the interactions and friendships that children develop during their formative developmental years and beyond.

Several previous studies with Portuguese samples have highlighted the impact that attachment security has directly on pro-sociality, by addressing behavioral and relational dimensions (Costa Martins et al., 2021a; Fernandes et al., 2019a, 2019b; Torres et al., 2008). In comparison, the pertinence of the studies presented (Chapters II to V) was the in-depth approach of this evidenced impact, by addressing it at the emotional level (focusing not only on emotion regulation, but particularly on sympathy and on moral emotions and their possible role in this domain of human development). The works of authors such as Nancy Eisenberg's conceptualization of other-oriented and self-oriented emotions (Eisenberg, 2000; Moll et al., 2008) were crucial for the theoretical contextualization of this goal. The conceptualizations by Tina Malti et al., (2018) of not only healthy guilt (ethical, non-ethical), of the absence of guilt, but also of respect (Malti & Ongley, 2014), also served as a guideline. Above all, they were theoretical foundations for the respective created measures (Eisenberg's sympathy scale, Eisenberg et al., 1991; SERT, Malti, 2017; and the respect interview, Malti, 2020), and the association between this type of emotion (and related factors, such as attachment security) to pro-sociality and its behavioral and relational dimensions.

The main and general aim was to provide a complete overview and outline of how these different psychological mechanisms around sympathy influence each other and are related to each other. Eisenberg's works on sympathy date back to the 1990s, however, despite not being considered an extremely new topic, in recent years there was an increased interest in researching kindness, and the role of attachment security in the etiology of moral and kind emotions as well (e.g., Costa Martins et al., 2021b; Mango., 2024; Murphy et al., 2015). Still, there was a lack of studies providing clear and significant evidence on mechanisms that could further explain how these theoretically and methodologically challenging and complex affective concepts are connected and how they develop. This last chapter compiles a critical discussion on the findings of the four studies, reflecting on the approach to such challenges and on possible future directions.

Starting by the beginning, the first study (Chapter II: Attachment and the development of moral emotions in children and adolescents: a systematic review – Costa Martins et al., 2021b) was a systematic review of recent literature that empirically connected attachment relationships and moral emotions (not only the emotions that were in fact the focus of this dissertation – sympathy, respect and guilt, but other moral emotions as well, such as empathy and altruism). However, due to the small number of studies found and a complementary aim to consider not only emotions, but also behaviors (a dimension already indicated and present in the studies extracted in the first review, although it was not its focus), there was a need to fill this gap with a second systematic literature review (Chapter III: Attachment and the development of prosocial behavior in children and adolescents: a systematic review, Costa Martins et al., 2022).

As the title suggests, looking to delve deeper into what was conceptually lacking in the first systematic review (and lacking in its search strategy as well), this second systematic review was performed to address recent empirical evidence linking attachment security and pro-social behavior. The very process of constructing both systematic reviews allowed the analysis of how two of articles that were extracted were common to both systematic reviews and their respective focuses (namely, Kim & Kochanska, 2017 and Panfile & Laible, 2012; respectively, representing 20% and 12.5% of the research found), evidencing and reaffirming the importance of addressing both socioemotional outcomes and research topics together (moral emotions and pro-sociality), as they appear inevitably interconnected. Various remaining articles by Deborah Laible that were extracted throughout both reviews should also be highlighted, as they also deal with these two themes in an articulated and interspersed way (i.e., Laible et al., 2004; Laible, 2007; Murphy et al., 2015). It was also possible, through these studies, to denote the relevance and strength of the interest and focus of current future studies in sympathy - as it is a subject of growing interest, and due to its distinction in relation to concepts that are often applied in an amalgamated way (with empathy, above all, but also with compassion, pity, concern). Systematic reviews such as the one here discussed can allow an amplified perspective and comparison on the definitions, conceptualizations of these different (but related) kind emotions, and how it best makes sense to conceptualize and operationalize them.

It should be reiterated that the several studies extracted from the first systematic review (Chapter II, Costa Martins et al., 2021b) showed consistently significant results and effects studied at a statistical level, despite differing methodologies, models, research quality and weights of results. Moreover, they supported what has been theoretically argued — the relationship between attachment and the socioemotional development of children and adolescents (more specifically,

moral emotions such as empathy, guilt, forgiveness and shame). However, the second systematic review (Chapter III, Costa Martins et al., 2022), while delving deeper into pro-social interactions and behaviors, didn't reveal the same kind of consistency in results (Bureau & Moss, 2010 found no significant differences in the levels of prosocial behaviors across the different attachment styles, but Eceiza et al., 2011 recorded higher values of prosocial behaviors with the secure and ambivalent styles, when compared to the avoidant style). Despite such small inconsistencies, most of the studies extracted still evidenced this expected significant effect. Thus, from both reviews we can gather that the effect of attachment security in relation to moral emotions seems to be more easily evidenced and more powerful (even though its conceptual formulation is complex, due to models diversity), and that although the conceptualization of the models relating to the effect of attachment quality on pro-social behavior is more homogenous, the effect itself does not seem to be as evident or significant when studied. This integrated reflection would benefit from future literature reviews and meta-analyses in which the association between attachment (or even other dimensions of the parent-child relationship) and these two socio-emotional aspects - kind emotions and pro-sociality - were both part of the article's search strategy and its methodology, something that was not possible in the current studies (where a more separate, detailed and synthesized approach throughout the study of both outcomes was favored).

The found literature, and these conclusions drawn from these reviews guided the formulation of the following studies - the two empirical studies and the final objective of this work, which showed from a developmental perspective the longitudinal effect of attachment security on the expression of sympathy and guilt, and finally the link between sympathy and the development of the pro-social dimension of children and adolescents, in the way they conceptualize, express and interact/ behave in respectful ways.

### **Previous findings on the impact of attachment quality on moral emotions and pro-social behavior.**

It is important to emphasize the pertinence of the focus of the current studies - sympathy. As a starting point, Chapter II, Costa Martins et al., (2021b) showed a predominance of instruments and empirical studies focused on empathy, but none on sympathy. Hence the innovative and meaningful nature of empirical research that distinguishes the latter, naming and measuring both concepts correctly. Considering the small numbers of studies extracted from both systematic literature reviews, there's a future need to broaden the search, looking for other empirical studies

that were not found in these initial searches (e.g., covering more databases and search tools, carrying out a meta-analysis instead of solely a systematic review).

There is a notable prevalence of studies with samples of adolescents, and of questionnaires to measure attachment (although only 18.18%, Costa Martins et al., 2021b; and 23.53%, Costa Martins et al., 2022, used observational measures), and empathy measurements (mostly tasks and scales designed for middle school children). Similarly to attachment measures, studies with observational measures to assess moral emotions (also 18.18%, Costa Martins et al., 2021b) and even pro-social behaviors (11.76%, Costa Martins et al., 2022) were scarce. Also regarding the instruments used in these extracted studies, there were no additional alternatives for measurements of sympathy. As such, the previously known sympathy scale (Eisenberg et al., 1991, Portuguese version, Costa Martins et al., 2024a) remained as one of the main option for measuring sympathy in children – as an instrument well-known in literature and used in research with children (i.e., Eisenberg et al., 1991, Catherine & Schonert-Reichl, 2011; Malti et al., 2009), however, with few items and, and as such, with psychometric fragilities (found in Costa Martins et al., 2024a, a preliminary factor analysis).

However, the scarcity of instruments and studies addressing sympathy, or of direct observational measures in general, were not the only gaps noted in these systematic reviews of the literature - the scarcity of studies with samples of pre-school children (a foundational and important period in the emergence of morality in childhood), of studies with socio-demographically diverse samples (there was a predominance of Caucasian samples in the studies found) and, finally, of longitudinal studies. Overall, even though the results presented found effects between attachment and moral emotions (Costa Martins et al., 2021b), and prosocial behavior (Costa Martins et al., 2022), there were significant gaps found that were considered pertinent to fill in the formulation of the next studies in this dissertation (by measuring sympathy, including observational measures and sampling 4- to 5-years-old).

It is important to emphasize that not all these limitations could be overcome just yet (e.g., as the sample of the following studies were predominantly Portuguese, and as such, it was not possible to avoid a predominance of Caucasian participants in the samples analyzed in the studies discussed next, nor was simple to achieve samples with more interesting dimensions for longitudinal studies with observational measures, especially during lockdown periods). Finally, it should also be noted that, with the growing interest in literature on these topics, more relevant and recent empirical studies have emerged. These new studies have shown the importance of not only the effect of security on attachment relationships, when mediated by emotion regulation (e.g.,

Mango, 2024), but also the importance of the effect of other domains of the parent-child relationship, either positive or negative (as shown by the meta-analysis by van Eickels et al., 2025).

Despite these aspects to reflect on, and the fact that regarding such topics a persistent model wasn't found between the various authors, it is important to reiterate the overall effect found in the literature not only between the quality of attachment relationships and adaptive moral emotions (Costa Martins et al., 2021b), but also between the quality of attachment and pro-social behavior (Costa Martins, 2022).

### **Longitudinal evidence on the effect of attachment on moral emotions, such as sympathy and guilt.**

The study that followed, Chapter IV: Attachment, sympathy and feelings of guilt: a longitudinal study during childhood (Costa Martins et al., submitted), attempted to empirically and longitudinally address the association between the quality of attachment relationships and two specific moral emotions - sympathy and guilt. This, in line with previous literature. As such, it was also important to consider the role of emotion regulation as a mediator (e.g., Mango, 2024; Murphy et al., 2015; Panfile & Laible, 2012).

This study followed a model closer to the one defended by Panfile and Laible (2012), rather than to the Kim and Kochanska's (2017) model (which considered empathy as a mediator between attachment and prosocial behavior). Thus, offering a broader overview of the hypothesized developmental path and trajectory to prosociality (that includes both moral emotions, but the implied mediation of emotion regulation as well). Symbolically, the closest analogy to such a trajectory would be that of a tree. A tree in which attachment relationships would be the base and foundation, the roots; emotion regulation, the tree trunk through which leaves and flowers grow (gentle and moral emotions), which would finally result in fruits that could manifest themselves in the form of pro-social behaviors.

The fact that previous literature has found consistent associations between the quality of attachment and the development of moral emotions (despite the non-congruent models found, Costa Martins et al., 2021b), but has not found the same consistency in significance when systematically studying the association between attachment security and the development of pro-social behavior (Costa Martins et al., 2022), led to the emphasis of not only the mediation described, but also, as an adjuvant analysis - the association between the moral emotions studied (sympathy

and guilt) and prosocial behavior. This association has equally been described and defended in previous studies (e.g., Malti et al., 2018). It's also worth addressing the timings of the measurements of emotion regulation and the various domains of moral emotions studied (sympathy and guilt) at a single data collection session in the longitudinal study (all measured during S2, 6 months after S1). Emotion regulation, like attachment and moral emotions, is a complex and multidimensional construct (LaFreniere & Dumas, 1996), not only depending on secure attachment as formulated by the model here discussed, but also on other biological and relational factors. As such, it was considered to measure emotion regulation at the same time as the adaptive and healthy expressions of sympathy and guilt (Eisenberg et al., 1991; Malti, 2017; Malti et al., 2009), as a way to ensure if this socioemotional competence of the child was established at the moment when the emotions studied were also instrumentalized (avoiding measuring these at extremely different times, as some path of deregulation or regulation could have already taken place). In short, attachment security was considered an implicit and consistent precondition, but emotion regulation as a necessary ability and acquired for the attachment effect to be observable, significant.

This study's goal was not achieved without its challenges, starting with the sorting of the age of the participants (4 to 5 years old). Theoretical background on moral development has long told us that it is at the age of 4-5 that children begin to develop their morality and their sense of what is right and wrong (Piaget, 1932), and that young children are able to express sympathy and guilt prior to that (Kochanska et al., 1994; Roth-Hanania, et al., 2001). However, this morality is still characteristically immature, heteronomous and dependent on the other (a moral authority figure, usually adults or institutions). As such, even though literature indicates these ages as potentially crucial for the development of emotions that are considered moral and pivoted to this development, one should consider that the conceptualization of emotions such as sympathy and guilt in pre-school children, might be still premature, somewhat distant or solely partially conquered from the pro-social and moral meaning socio-emotional development literature completely implies. As such, one can reinforce what is defended by authors such as Berti et al., (2000); Olthof et al., (2000) and Malti (2016) - that especially complex feelings of guilt, although they emerge early, only begin to consolidate at the age of 8 and are seen as established only in adolescence. This reflection also emphasizes that the instruments empirically used, although suitable for the ages studied (considering especially, the adaptation made by incorporating a visual Likert scale to assist the responses of the participating children), might have caused a mismatch between the preschool children's understanding of sympathy and guilt and what was in fact measured (since the instruments are also used with older children).

Still looking more closely at the instruments used and the findings, it is important to consider that the *Socioemotional Responding Task* (SERT) seeks to measure a healthy and adaptive form of guilt by using scenarios that are appropriate for the emergence of this moral emotion. However, it may not distinguish this guilt in its most intense, frequent or maladaptive (clinical) form. This is because the obtained models associated with guilt have not consistently demonstrated a positive association with attachment, on the contrary (see Chapter IV - Results, Costa Martins et al., submitted).

These theoretical considerations and methodological challenges (as well as others, detailed below), might explain why a mediation effect and statistically significant models were found, but the meaning of this overall effect was unclear when analyzed in detail (whether positive or negative), and there was no congruence in this respect. This incongruity is in line with what has previously been found in literature (studies with older participants such as middle schoolers or adolescents, with different models regarding these emotions, Costa Martins et al., 2021b). Despite these considerations, the results presented in Chapter IV reiterate the idea of a model and an association between the variables studied. Although these were non congruent, they reinforce the need for further research into this topic. For instance, an apparent greater fragility of the significance of the mediation of emotion regulation was found in moral emotions considered to be oriented towards the other (sympathy for the other, also measured by the Eisenberg scale), when compared to emotions oriented towards the self (guilt and sympathy for the self). This is a point worth exploring further and may be associated with the very internal nature of the child's capacity for emotion regulation (i.e. understanding and containing their own emotions). Is this therefore a skill closer to self-oriented emotions? And, therefore, has a more obvious effect?

When analyzing these results, one should also consider that while the *Attachment Story Completion Task* (Bretherton et al., 1990) and its associated scale allow for an objective, scalable and flexible way of measuring attachment security and thus its different intensities, it does not differentiate between the different forms of attachment insecurity (particularly, from avoidant and ambivalent patterns, Ainsworth et al., 1978), and thus the different impacts that each of these insecure attachment patterns may have (and thus the different models resulting from these theorizations).

### **Links between sympathy and different domains of respect (cognitive, affective and behavioral domains).**

At last, the final chapter (Chapter V: Respect and sympathy in Portuguese preschoolers and middle-school children, Costa Martins et al., 2024b) intended to explore the link between the hypothesized “flowers” (moral emotions) and their “fruits” (prosocial behaviors), as assumed in the previous analogy. In essence, to empirically evidence (through a cross-sectional study) the associations between sympathy and how children (5 to 8 years old) not only constructed the concept of respect, of feeling of being respected, but of respectful behaviors as well.

Maintaining the ongoing focus on children’s sympathy, the aim was to deepen and continue the priority given in the previous study to the correlations between this specific feeling and pro-social postures (this time focusing on respectful behaviors), also addressing the conceptualization and emotional emergence of these same behaviors through the interview on respect (Malti, 2020; Malti & Ongley, 2014), which sought not only examples of behavioral expressions, and on children’s understanding of what respect means and to feel respected by others (including both the perspective of the self and of the other). This deepening and complexification required not only the participation of preschoolers, but older children too (middle school). Especially considering the predominantly moral and ethical nature behind respect (and hence, the focus on describing fully each domain studied (respect conceptualization, expressions of respect and of respect from others)).

This last study findings were aligned with previous literature on respect (Drummond, 2022; Kuryluk et al., 2011; Langdon & Preble, 2008; Lim et al., 2020). However, the observed associations were frequently modest, potentially attributable to the inherent complexity of conceptualizing both respect and sympathy, as well as the emerging nature of the topic and the measurement instruments employed, particularly within a research context.

The most conspicuous limitation of this study, which is transversal to the previous empirical study, will be the reliability of the instruments used - namely the questionnaires that measured moral emotions (e.g. previously mentioned Eisenberg’s Sympathy Scale). In this respect, authors such as Hair et al., (2010; 2014), Nunnally and Bernstein (1994) explain that Cronbach’s alphas around 0.6 can be accepted in the early stages of scale construction and in small scales that measure multidimensional complex constructs (which characterizes both the Sympathy Scale, the SERT, and the measured concepts by each). Notwithstanding, it is crucial that subsequent studies implementing these instruments and seeking to measure these variables be preceded by refinements

in the instruments' formulation, as well as in their psychometric and methodological frameworks. Before such improvements are implemented, it should be reiterated that results from instruments with such limitations should be interpreted with caution and used as a starting point for further, more robust measures and models (which, in turn, allow for less contaminated results). This is one of the intentions of this current critical reflection.

The main strength of this particular research was the use of a semi-structured interview and an analysis of its associated contents (as a richer alternative to questionnaires or parents or teachers reports). The main limitation is the cross-sectional nature of this research's design, especially as it deals with an understanding of children's emotional development. It would be important, from the perspective of a cross-sectional study (especially, one that used online data collection), to establish a preliminary activity or task prior to instruments administration (respect interview and sympathy scale), which would act as an effective icebreaker to make the participating children feel more comfortable talking about their own emotions and emotional development. There was a significant difference in this aspect when comparing this study (that used only one session of data collection), with the previous presented study (Chapter IV, Costa Martins et al., submitted), which used a longitudinal study and also made it easier, through the nature of the play tasks associated with the instruments as well, to create this greater trust and ease within the participating children. On the other hand, this study also mirrored a methodological challenge experienced during the research carried out in the previous study - the adaptability of the instruments in question for all ages (younger and older children), across several ages (something that was not possible in the longitudinal study). It was therefore attested that older children find the real purpose behind these types of tasks asked of them more naturally and, consequently, highlighting the need to adapt them (not only in terms of form, but also content) when dealing with younger children. In the present study, it was possible to adapt it in terms of form (by adding a visual aid to the Likert scale), but not in terms of content (given that the original form of these instruments is constantly being reconstructed, validated and is widely used in literature - i.e. SERT, Sympathy scale).

### **Future recommendations and final conclusions**

It would be a failure to address all these results without contextualizing the last few years socially and culturally, the years in which this body of scientific work was built. In particular, the impact of a pandemic and two international armed conflicts. In different ways, each of these contexts were part of the day-to-day work in the field (from the use of masks, to answers such as

“If I do feel sympathy for children who don’t have clothes or toys? Like in Ukraine, right now?”), and as such should certainly be considered in a final reflection. It seems that it has never been more important to talk about the role of feeling compassion, sympathy for others, helping and respecting them (and their differences).

The constant exposure or awareness of great suffering and conflict that was occurring at “home” (pandemic) or elsewhere in the world, has led to these issues being part of the families’ daily lives considerations. The true question remains, what impact did they have on children’s socio-emotional development? And what characterized a sympathetic yet sensitive approach to these issues? Safely talking about the associated emotions, talking about what was felt and seen, may have allowed a place of safety and trust to receive these more violent contents. And, desirably, for that violence to find a more thoughtful, empathetic place within the child, and not so violent place within him or her own self. A place to talk comfortably about what prompts fear, sadness and anger. In part, this openness and dialogue were present and observed in the fieldwork in the children’s own schools and homes and may be partly responsible for the children’s extremely high sympathy levels in both empirical studies presented here. This effect may have contaminated the instrument’s internal consistency, and it would therefore be important to explore it outside of these more concerning circumstances and environments. Additionally, the opposite trajectory should also be considered in future research. That is, for the violence of the world to meet the violence of the child, and hence, the constant exposure to cruelty and suffering conceivably leading children to great self-centeredness, self-protection and greater isolation and violence (thus creating a cycle of aggressiveness that we so often see in less healthy families’ dynamics). For future research, this might be particularly relevant to individuals that previously contacted with such concerning scenarios (e.g., refugees, victims of the war or of the pandemic). Historically, the serious losses or separations that children suffered during the great wars of the 20th century were important for the foundation of theories such as attachment theory itself (i.e., Bowlby, 1951;1969/1982; 1973). Looking at the examples of the past, it will be pertinent in future research on this subject not to ignore the contributions and socioemotional development repertoires associated with current conflicts and more sensitive contexts (not only regarding emigration, but also institutionalization and all-round poverty).

Beyond the visible methodological impact (e.g., applying tasks and interacting with young children wearing a mask during data collection; the samples with evident small dimensions due to parent’s apprehension), its emotional impact should be reiterated and emphasized even more, and focused on in future studies. In the current findings, high levels of sympathy were found in most

of the participating children. Might a world with such visible suffering and needs really be more conducive to concern and sensitivity in parents and children themselves? On the other hand, what role could the initial months of the pandemic have played, since children were deprived of their usual social contact with friends, classmates and cousins around the same age? These are questions that have proved important to answer, especially in view of the discussion of the results found in the first empirical study (Chapter IV, Costa Martins et al., submitted), where the impact of attachment insecurity, mediated by emotional dysregulation could also be crucial to investigate by referring to the unregulated and not so healthy forms of sympathy and guilt.

There are several future recommendations to list, starting with reiterating the importance of more comprehensive and rigorous study extraction methods, such as meta-analyses (in terms of reviewing the literature on these or similar topics), as well as obtaining more interesting sample sizes that increase the statistical significance and power of the results obtained, highlighting them. Finally, reemphasize the adaptation of the form and content of the instruments that measure moral emotions for pre-school children (to a format for children who are learning to write and to count, and for the language to be more accessible and appropriate for their age and moral stage); the use of direct observation measures, of various reports, addressing other dimensions of parent-child relationships (warmth, sensitivity, among other dimensions that address the emotional availability of parents and communication); as well as, when studying attachment relationships, using a categorical approach and associated with the well-known attachment patterns of Ainsworth et al., (1978). In essence, although it is possible to explain and comprehend the difficulties associated with the choice of instruments used in the empirical studies presented (derived from the very developmental and emotional nature of the concepts themselves, the low number of items used), future research should prioritize the use of larger instruments/scales (even associated ludic tasks, scales or questionnaires) with more robust psychometric properties.

One final inconsistency can be noted regarding the work presented here, as a whole - the different empirical designs used (longitudinal, Chapter IV, Costa Martins et al., submitted; and cross-sectional, Chapter V, Costa Martins et al., 2024). Even though both works demonstrate different methodological and statistical abilities, flexibility and capacity to operate both designs, given the developmental theoretical background and the importance of measuring and studying transformations over time, it would make sense to unanimously prioritize longitudinal designs. As such, having established the replication and description of respect in a Portuguese samples through a cross-sectional study, it would be interesting to also approach the development of respect from a longitudinal perspective.

In essence, on methodological and conceptual levels, the link between attachment, moral emotions, and prosociality (behaviors) should be established in a more integrated manner. This is true for future systematic reviews or meta-analyses, as well as for the formulation of theoretical and developmental models used in future empirical studies. In the present body of work, pro-social behaviors were addressed as an isolated complement in two different ways. First, through the creation of a second systematic review of the literature. Second, in the first empirical study (Chapter IV), through correlations with moral emotions. The integration of an understanding of pro-social behavior and interactions, such as helping, sharing, and comforting, could be more thoroughly incorporated into the research strategies of previous findings and the models hypothesized not just as complements. This comprehensive and integrated approach, akin to the tree analogy, incites a more profound comprehension of these developmental trajectories. Consequently, it enables more effective study and intervention in these domains early on, during childhood. The results presented here intended to contribute to this approach and broader comprehension.

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