

The relationships between empathy and social behaviours in middle childhood

Eva Pires* / Marília Fernandes*  / Carla Fernandes*  / Manuela Veríssimo* 

* ISPA – Instituto Universitário, William James Centre for Research, Lisboa, Portugal

Abstract: Concern for others' welfare is part of normative development. However, some children respond to others' distress with concern and helpful approaches, while others respond with suspicion, hostility, indifference. Although the literature around empathy has increased over the years, there isn't a consensus over its associations with prosociality and internalizing or externalizing problems. A sample of 199 children (50.8% girls) between 10 and 15 years ($M=12.05$; $SD=0.98$), reported on their empathy and social behaviours using the QACE – Questionnaire to Assess Affective and Cognitive Empathy (Zoll & Enz, 2010) and the SDQ – Strengths and Difficulties Questionnaire (Goodman, 1997) respectively. Our results indicate that girls were more prosocial and empathic, but also presented higher levels of internalizing problems, compared to boys. Affective but not cognitive empathy was related with internalizing problems. Cognitive empathy was significantly related with prosocial behaviour. No significant relations between empathy and externalizing behaviours were found.

Keywords: Empathy, Internalizing behaviours, Externalizing behaviours, Prosocial behaviours.

In today's world full of conflicts, empathic capacity is becoming increasingly important. Empathy has long been viewed as a desirable characteristic and is generally associated with several interpersonal benefits, although recent research also points to the risk of some personal consequences (MacDonald & Price, 2019).

Empathy has been extensively studied over the last century, however there isn't a consensus over its definition (Engelen & Röttger-Rössler, 2012). According to Davis (1983), it's the ability to put ourselves in someone else's shoes and thus understand their perspective and emotional states. Research suggests empathy as a multidimensional construct, involving at least two dimensions (see Sesso et al., 2021 for review): affective empathy, that involves experiencing and reacting to other's emotional state (Bray et al., 2021; Davis, 1983; Stefan & Avram, 2018); and cognitive empathy, that implies intellectually understanding other's perspective by imagine the reasoning behind that feeling or thought (MacDonald & Price, 2019; Stefan & Avram, 2018; Tone & Tully, 2014; Zaki & Ochsner, 2016). Although related, these two dimensions are distinct and can function independently (Tone & Tully, 2014).

Basic affective empathy components emerge noticeably young and can be observed as early as the neonatal period, involving both basic emotion-understanding skills (e.g., emotion recognition) and emotional reactivity processes (e.g., emotion contagion) (Bray et al., 2021; Tone & Tully, 2014). Evidence suggest that babies have a natural tendency to respond to other's emotional signals, such that by earing same-age infants crying they resonate with that expression of distress, become themselves distressed and start crying too (Decety et al., 2018; Diego & Jones, 2007;

Correspondence concerning this article should be addressed to: Marília Fernandes, ISPA – Instituto Universitário, William James Centre for Research, Rua Jardim do Tabaco, 34, 1149-041 Lisboa, Portugal.
E-mail: MFernandes@ispa.pt

Hutman & Dapretto, 2009; Tone & Tully, 2014; Zahn-Waxler & Van Hulle, 2012). The ability to reason about other's intentions improves during the first few years of life, which facilitates a more sophisticated understanding of why other's show signs of distress (Tone & Tully, 2014). In this line, cognitive empathy develops later than affective empathy, involving the same constructs of theory of mind and empathic accuracy (Bray et al., 2021; Decety et al., 2018).

Empathy and internalizing behaviour problems

Empathy is usually associated with positive outcomes, although under some circumstances it might be associated with maladaptive ones (Tone & Tully, 2014). This might happen when: (1) the empathic reaction to the other's distress are extremely aversive do the self; (2) the individual take the other's perspective in an excessive degree; (3) when individual ruminates about his role in the other's distress; or (4) the individual has negative thoughts or feelings about other's distress (Gambin & Sharp, 2016; Tone & Tully, 2014). This empathic overarousal might result in feelings of depression, anxiety, guilt and withdrawal from interpersonal situations (Gambin & Sharp, 2016; MacDonald & Price, 2019; Telle & Pfister, 2016; Tone & Tully, 2014). A systematic review by Schreiter et al. (2013), using adult with depressive symptoms, concluded that, depressive symptoms were associated with empathic distress and with impairments in cognitive empathy.

In this way, the link between extreme empathy and the vulnerability to develop internalizing symptoms, maybe understood through the lens of affective or cognitive empathy. Several studies have demonstrated that the affective dimension of empathy, which underlies personal distress, represents a risk factor for the development of different internalizing problems (Blair, 2005; Gambin & Sharp, 2016, 2018; Gawronski & Privette, 1997; Schreiter et al., 2013; Shu et al., 2017; Siltan & Fogel, 2010; Thoma et al., 2011; Tone & Tully, 2014; Zahn-Waxler et al., 1991). In adults and youths, some research also points to the link between the personal distress and anxiety, depression and guilt (e.g., O'Connor et al., 2002, 2012; Schreiter et al., 2013; Thoma et al., 2011; Zahn-Waxler & Van Hulle, 2012). Literature also indicates that depressive and anxious patients, are more at risk to experience higher levels of distress and affective empathy, and lower levels of cognitive empathy (Alvi et al., 2020; Schieman & Turner, 2001; Schreiter et al., 2013; Washburn et al., 2016). According to O'Connor et al. (2002), individuals with depression may suffer from biased cognitions as they see themselves harmful to other's and may react to other's distress by imagining their own reaction to a past emotional pain (Gambin & Sharp, 2016; Schieman & Turner, 2001). Another study showed that people with anxiety are less accurately on tasks of cognitive empathy probably because of excessive theory of mind or over-mentalizing (Alvi et al., 2020; Washburn et al., 2016). Cognitive empathy, which might be related to co-rumination – the tendency to be distressed by discussing and rehashing other's problems, without being able to comfort them, was also suggested as a risk for developing internalizing behaviours in other study (Cherewick et al., 2022).

Empathy and externalizing behaviour problems

Some studies focus on the key role of empathy in reducing some externalizing problems, like aggressive behaviour (Cherewick et al., 2022; Lo Cricchio et al., 2022). In this way, people who can understand and adopt other's perspectives and have compassion and vicarious share the same emotions as them, are more likely to avoid mutual aggression or any type of harm (Eisenberg, 2000; Gambin & Sharp, 2016; Gini et al., 2005). Empathy might also reduce externalizing problems as it fosters the ability to comprehend the real motivation behind others' behaviours and reduces the risk of wrongly classifying them as aggressive and, if they have that connotation, it also enhances the ability to tolerate them (Farrington, 1998). On the other way around, one study

found that individuals who show a higher level of aggressive behaviour, also expressed lower empathic concern (Bush et al., 2000). Several other studies found that conduct disorder, which underlines aggressive behaviour, is related to lower levels of empathy (Lovett & Sheffield, 2007; Miller & Eisenberg, 1998; Schwenck et al., 2012; Sterzer et al., 2007). Also, according to Gambin and Sharp (2016), individuals with externalizing disorders display an opposite cognitive style, meaning that instead of having self-debasing distortions or self-focus, they are characterized by self-serving and blaming others, which decreases empathic distress and empathic responses. Despite these considerations, other studies did not find differences in empathy levels between violent and non-violent youths (Lindsey et al., 2001). Such weak associations between empathy and aggression were also documented in the Vachon et al. (2014) meta-analyses. However, increasingly literature demonstrates that empathy may also enhance interactions in the social world, promoting prosocial behaviour (Brazil et al., 2023).

Empathy and prosocial behaviour

Prosociality has been defined as a series of voluntary behaviours that are meant to benefit others and promote positive social relationships (Eisenberg & Miller, 1987; Nantel-Vivier et al., 2014). This trait can be characterized by the tendency to care, share, comfort and help other people (Flouri & Sarmadi, 2016). Prosocial competence emerges within the first years of life, due to the function of their growing cognitive and behavioural competence (Eisenberg & Miller, 1987; Nantel-Vivier et al., 2014). During preschool and school years, they become increasingly capable of having prosocial behaviours based on empathic feelings and thoughts (Eisenberg & Miller, 1987). Around this age, children also have increasing language skills, which prompts as a potential predictor for later concern of others (Tone & Tully, 2014). As children increases their understanding of emotions and causes, their ability to generate empathic responses and behaviours also expands (Tone & Tully, 2014).

From early on children show concern for other's welfare and demonstrate signs of empathy and prosociality (Decety et al., 2016). Children of 1 and 2 years-old express comforting behaviours towards someone who is in distress and can even give up their favourite object as an empathetic action (Davidov et al., 2013; Knafo et al., 2008). Also, children of 12 months can help others by informing, like pointing toward an object that the experimenter is searching for (Dunfield et al., 2011). According to Decety et al. (2016), toddlers from 14-18 months old show signs of helping behaviours by fetching desired objects that are out of reach to the experimenter and helping to complete chores. Around 2 years old, children are sensitive to other's distress and their prosocial interventions now take a variety of forms like sharing, helping and comforting (Decety et al., 2016). Finally, around 5-6 years old, prosocial behaviour is significantly correlated with the emotional state of the victim but not of their own, suggesting that empathic concern is what is influencing prosociality, instead of personal distress (Williams et al., 2014). As Decety et al. (2016) states, this early emergence of prosociality reflects a biological predisposition to act upon empathic motivations.

However, a past review found that this association between empathy and prosocial behaviours wasn't significant (Underwood & More, 1982). Brazil et al. (2023) defend that these small effects may be attributed to the differential relations between the different forms of empathy and prosocial behaviour. Vossen et al. (2015) found a strongest association between cognitive empathy and prosociality, than with affective empathy. Decety and Yolder (2016) found no relation between affective empathy and prosocial behaviours but did find for the cognitive dimension. Other theorists argue that empathy mediates prosocial actions that have altruistic motivations, even though most studies use measures that are unlikely to be motivated by altruistic considerations and reflect scripted social behaviour or compliance to the peers demands (Eisenberg & Miller, 1987).

The literature around empathy has become increasingly extended over the years, although there isn't a consensus over its associations with prosociality and internalizing or externalizing problems. In this line, the present study aims to examine the association between empathy, prosocial behaviours, internalizing and externalizing problems.

Method

Participants

The sample included 199 children (50.8% girls and 49.2% boys) between 10 and 15 years ($M=12.05$; $SD=0.98$). They were distributed by school years, 31.7% were in 5th degree (52.4% girls and 47.6% boys; age $M=11.08$, $SD=0.41$), 40.7% in the 6th degree (45.7% girls and 54.3% boys; age $M=12.05$, $SD=0.67$) and 27.6% in the 7th degree (56.4% girls and 43.6% boys; age $M=13.16$, $SD=0.54$). Most children had siblings (82.9%).

Mothers' age ranged between 29 and 57 years ($M=41.99$; $SD=5.36$) and fathers between 29 and 65 years ($M=44.61$; $SD=6.65$). Mothers' education level varied between 4 and 19 years ($M=14.05$; $SD=3.52$) and fathers between 4 and 21 years ($M=13.71$; $SD=3.88$). Most parents lived together (54.4% were married; 4.7% were cohabiting and 23.3% of the families were separated or divorced, 17.6% were in another situation) and worked full-time (96.2% mothers; 98.3% fathers).

Most of the children said they didn't have or had professional psychological support (65.3%), mostly on private context (68.8%), 28.1% said that they have/had (mostly on private context 68.8%), and 6.5% preferred not to answer. From those who said that don't have/had that support 19.7% said they wished to have it and 12% preferred not to answer, most of the children said that they didn't want it. Most children said not having sleeping problems (49.2%), 34.7% reported having sleep problems and 16.1% preferred not to answer. Most children said they were not bullying victims (57.8%), 27.6% were bullying victims and 14.6% preferred not to answer.

Most children (51.3%) report spending 1 to 3 hours/per day seeing digital content (e.g., *Netflix*, *Youtube*), 16.6% report spending less time and 19.1% more time. Regarding online social networks 80.9% report spending less than 3 hours/per day (22.6% report not spending anytime, 48.7% less than 1 hour and 32.2% 1 to 3 hours/day), 8.5% report spending more than 6 hours/per day. The same was true for videogames with most of the children (63.8%) report spending less than 3 hours/per day (12.6% report not spending anytime, 33.2% less than 1 hour and 30.7% 1 to 3 hours/day), 18.1% report spending more than 6 hours/per day.

Instruments

Empathy.

Affective and cognitive empathy scores were obtained using the *Questionnaire to Assess Affective and Cognitive Empathy in children* (QACE, children version, Zoll & Enz, 2010). Children completed the self-reported questionnaire using a 5-point scale. The 22-item instrument assesses two dimensions: *Affective Empathy* (12 items), that relates to the process whereby emotions are experienced due to the perception of internal states in other (either emotions or thoughts and attitudes); and *Cognitive Empathy* (10 items), that includes different cognitive processes, from simple associative over learning mechanisms to explicitly taking over other's perspective. The *Global* score is the average over all 22 items. The instrument had acceptable psychometric qualities in the Portuguese version ($\alpha=.85$ for the *affective* and $\alpha=.71$ for the

cognitive dimension; Veiga & Santos, 2011), as well as in the present study ($\alpha=.77$ for the *affective*, $\alpha=.72$ for the *cognitive* dimensions and *global* score $\alpha=.83$).

Social behaviours.

Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) was used to measure prosocial, externalizing and internalizing behaviours. It is a brief behavioural screening that allow us to identify emotional and behavioural problems in children and adolescents. It has different versions, and, in this study, it was used the youth self-reported measure for 11-16 years-old (Goodman et al., 2010). Children and adolescents report on 25 items that are organized in 5 difficulties subscales, each one of them with 5 items: *emotional symptoms*, *conduct problems*, *peer relationship problems*, *hyperactivity/inattention* and *prosocial behaviour*. Each item is scored on a 3-point scale (0=Not True; 1=Somewhat True; and 2=Certainly True), with higher scores indicating more problems for all subscales, except for the prosocial one. The scoring can be done by two different methods. We can consider that there is the prosocial behaviour scale and generate the ‘total difficulties score’ with the other’s original scales (by summing the emotional symptoms, hyperactivity/inattention, conduct problems and peer relationship problems). In this study we considered the alternative score to low-risk populations, diving SDQ into ‘internalizing problems’ (by summing emotional symptoms and peer relationship problems), ‘externalizing problems’ (by summing conduct problems and hyperactivity/inattention) and prosocial scale (Goodman et al., 2010). In the Goodman et al. (2010) study, factor analyses generally supported this second scoring, with good convergent and discriminant validity on the internalizing and externalizing subscales. In this study there has an $\alpha=.58$ for the prosocial behaviour, the ‘internalizing problems’ dimension had an $\alpha=.60$ and the ‘externalizing’ dimension showed a $\alpha=.66$.

Results

Children in our sample described themselves as empathic, with girls presenting significantly higher values compared to boys (see Table 1). There was also a significant negative correlation with child’s age (AE $r=-.27, p<.01$; CE $r=-.15, p<.05$; GE $r=-.24, p<.001$). Father’s education level was positive correlated with child’s empathy (AE $r=.18, p<.05$; CE $r=.19, p<.05$; GE $r=.21, p<.05$). No other significant differences or associations were found.

Table 1
Descriptive for child’s empathy

	Total		Girls		Boys		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Affective Empathy (AE)	3.94	0.63	4.21	0.57	3.67	0.57	2.26**
Cognitive Empathy (CE)	3.94	0.50	4.01	0.53	3.86	0.45	6.61***
Global Empathy (GE)	3.94	0.49	4.10	0.47	3.77	0.45	5.05***

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

Children described themselves as having significantly more prosocial behaviour than behavioural problems [$t(2,198)=-29.71, p<.001$ and $t(2,198)=-19.15, p<.001$ comparing prosocial behaviour with internalizing and externalizing problems respectively] and more externalizing than internalizing problems [$t(2,198)=8.18, p<.001$] (see Table 2). Girls presented significantly higher

values on internalizing and prosocial behaviours compared to boys (see Table 2). There was also a significant negative correlation between externalizing behaviours and child's age ($r=-.17, p<.05$). Fathers' educational level was significantly correlated with child's prosocial behaviour ($r=.17, p<.05$). No other significant differences or associations were found.

Table 2

Descriptives for child's behaviour

	Total		Girls		Boys		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Externalizing	1.86	0.35	1.88	0.38	1.83	0.33	<i>n.s.</i>
Internalizing	1.66	0.30	1.72	0.30	1.60	0.28	2.87**
Prosocial	2.58	0.34	2.64	0.33	2.51	0.35	2.60**

Note. ** $p<.01$; *n.s.*=non-significant.

Three hierarchical regression analysis were performed, one for each type of behaviour (externalizing, internalizing and prosocial). Child's sex and age as well as fathers' education were entered on the first block and child's empathy (both cognitive and affective) on the second block.

Although child's sex was a significant predictor for both internalizing and prosocial behaviours, when empathy was added, only child's affective empathy was significant ($R^2=.11, \Delta R^2=.07, \Delta F=5.83, p<.01$; with $\beta=.36; t=3.31, p<.001$) for internalizing behaviours and only child's cognitive empathy was significant ($R^2=.20, \Delta R^2=.10, \Delta F=9.14, p<.001$; with $\beta=.24; t=2.71, p<.01$) for prosocial behaviour.

For child's externalizing behaviours, there was a significant relation with child's age ($\beta=-.17; t=-2.00, p<.05$), however, when empathy was added none of the variables reached significance.

Discussion

As expected, gender influenced our results, showing that girls were more prosocial and empathic, which is in line with the previous literature that shows that boys usually exhibit lower levels of this variables, possibly due to social perception and gender stereotype (Belacchi & Farina, 2012; Eisenberg & Fabes, 1998; Schwenck et al., 2014). Also, our study was in line with the theoretical field (Gambin & Sharp, 2016; Nantel-Viver et al., 2014), showing that girls have higher levels of internalizing problems, compared to boys. Zahn-Waxler and her collaborators (1991) proposed a model that explains that girls with highly capacity of empathy may be at particular risk for internalizing problems due to gendered patterns of socialization. Literature suggests that it is attributed importance to the girl's ability to recognize, identify and respond to other's emotional state, and, for those who already have excessive empathy this may put them at risk for empathic stress that leads to internalizing problems (MacDonald & Prince, 2019).

Regarding age, we got a surprising result that showed that empathy decreased with child's age. In the study of Schwenck et al. (2014), it was found that older children and adolescents show higher cognitive empathy skills, compared to preschool years, particularly in the components of emotion recognition and affective perspective taking. In this way, it was expected that our results were in line with this framework and further studies will be necessary to explain our different result. Another result regarding age that was not that surprising, was that externalizing problems decreased in older children. In most of the studies, normative children exhibit lower levels of

externalizing problems over time, as they have a better understanding of emotions and how to handle them (Broidy et al., 2003; Campbell et al., 2006; Fanti & Henrich, 2010; Nagin & Tremblay, 1999; Shaw et al., 2003).

Our findings demonstrated that children with higher affective empathy had more internalizing problems, which is broadly consistent with an extant literature (Gambin & Sharp, 2016, 2018; Schreiter et al., 2013; Shu et al., 2017; Tone & Tully, 2014). Specifically, this result indicates that a heightened identification with the other's emotional experience, in some cases feeling those emotions through personal distress, is associated with internalizing symptoms such as depression, anxiety and stress (Bray et al., 2021; MacDonald & Prince, 2019). Some studies point to the positive association between empathic distress and depressive symptoms in adults (Schreiter et al., 2013). Other studies found an association between empathic distress and anxiety (Shu et al., 2017; Tibi-Elhanany & Shamay-Tsoory, 2011), and one found an association between affective sharing and anxiety (Tibi-Elhanany & Shamay-Tsoory, 2011). Some studies with children found that this excessive empathy and empathic distress, were related to depressive symptoms (Olweus & Endresen, 1998; Robins & Hinkley, 1989).

One theory developed by Bray et al. (2021) is that there are four components of empathy: cognitive empathy and three of affective empathy - affective sharing, empathic concern and empathic distress. Accordingly, cognitive empathy and affective sharing are empathy processes, while empathic distress and empathic concern are considered emotional reactions to other's experiences (Davis, 1983). Some studies have argued that an individual may respond more with empathic distress, rather than empathic concern, if there is a gap off their ability for emotion regulation and self-other distinction (Lamm et al., 2007). Some studies have shown that emotion regulation is one of the core processes involved in empathy and is highly implicated in some internalizing problems, like depression and anxiety (Amstadter, 2008; Decety, 2010; Ehring et al., 2010). In this way, the most reasonable explanation is that individuals who excessively empathize with the negative emotions of other's, may then feel difficulties in regulating and modulating their emotional expression, responding with empathic distress that then induce internalizing problems (MacDonald & Prince, 2019).

Alternatively, it was shown that there was an underlying tendency – emotional reactivity – between affective empathy and internalizing symptoms in children, such as anxiety, negative mood and interpersonal problems (Wei et al., 2005). Emotional reactivity is defined as the degree to which someone responds to environment stimuli with hypersensitivity, lability or emotion flooding (Bray et al., 2021). In this way, children who are more sensitive and reactive to the emotional states of others may report higher levels of affective empathy and higher levels of anxiety and depression (Bray et al., 2021).

According to Zahn-Waxler and Hulle (2012), a high capacity of empathy is not detrimental on its own but can increase the levels of internalizing problems when it's combined with other intra or inter-individual factors. Even though this study did not assess them, other authors found that rumination and worry can increase the link between both self-reported empathy (Greenberg et al., 2018) and internalizing problems (Watters & Wojciak, 2020).

Affective empathy increases brain activity and is involved in emotional processing, understanding and simulating other's actions, so it facilitates mirroring of the other's states to a greater extent than cognitive empathy (Gabin & Sharp, 2016). In this way, it makes sense that on our study cognitive empathy wasn't related to internalizing problems, like the affective dimension was. This lack of findings is in line with some of the previous literature, that did not find associations between these two variables as well (Bray et al., 2021; Derntl et al., 2012; Gambin & Sharp, 2016; Lee, 2009; Schneider et al., 2012; Thoma et al., 2011). Our lack of a significant association between cognitive empathy and internalizing symptoms may be explained through measurement limitations or developmental factors. Taking this into account, cognitive empathy

is developed throughout middle childhood (Devine & Hughes, 2016), so more complex cognitive skills that drive the association with internalizing symptoms, may not be yet present in children with an average of 12 years-old, like they were in our study.

Another consensual idea that has been accepted in the history of psychology is that empathy is an important determinant of prosocial behaviour (Aronfreed, 1970; Batson & Coke, 1981; Eisenberg & Miller, 1987; Feshbach, 1978; Hoffman, 1984). Regarding this, our study found that only child's cognitive empathy was significant for prosocial behaviour. In this way, our findings indicate that cognitive and affective empathy appear to be independent constructs and relate differently to the prosocial aspects (MacDonald & Prince, 2019).

As it was exposed before, children who have excessive affective empathy and can't clearly differentiate their own internal states from those around them, may feel personal distress and become very unlikely to help or to have prosocial behaviours (Hoffman, 1984). However, the capacity to accurately understand other's emotions and differentiate between their emotional states and the other's – which is a core component of cognitive empathy – has been cited as a precursor to prosociality (Eisenberg & Miller, 1987).

Emotion understanding is a very complex cognitive construct and allows children to catch other's points of view, emotions, desires, beliefs, and intentions (Belacchi & Farina, 2012). These capacities seem to be fundamental to give an adequate response during interactions with others, particularly during times of distress (Belacchi & Farina, 2012). Other authors have suggested that other cognitive components are crucial for these positive social behaviours, like the ability to mentally represent emotion-eliciting events or people's internal states (Barnett & Thompson, 1985; Belacchi & Farina, 2012).

Children with advanced perspective-taking ability may have an advantage in discerning when someone needs help when that need is subtle and must be inferred, compared to someone who can only understand when the need of the other is really obvious and salient (Peterson, 1982). In this way, children who can understand these subtle cues and can infer the other's feelings, might be more aware of the need to offer assistance to the other's and, therefore, come across as more prosocial (Barnett & Thompson, 1985). This perspective-taking ability is one of the highest cognitive implications and is associated with greater mind-reading skills, allowing children to comprehend hidden emotions (Belacchi & Farina, 2012). The increase of this cognitive ability that allows them to also comprehend different causes of emotions, promotes more empathic responses to the stimuli even when the facial expression is not coherent (Belacchi & Farina, 2012). Additionally, it facilitates to consider the implications of the personal characteristics of other's and both the situation itself, implying a clear distinction between their own's emotions and those of other's (Belacchi & Farina, 2012). In this way, the comprehension of other's emotions and the ability to differentiate between ours and those of others, are the core ingredient of cognitive empathy that then elicits prosociality.

Like every study, some limitations should be considered when interpreting our findings. Firstly, all measures were self-report questionnaires, which may limit comparisons with other studies that used task-based or observational measures. The value of self-report questionnaires relies on the assumption that the participants are aware of their feelings and can decipher and report them accurately (Eisenberg & Fabes, 1990). However, children may have difficulties in comprehending questions or to be able to differentiate among closely related emotional states (like feeling empathy or becoming stressed by the other's) (Eisenberg & Fabes, 1990). In this line, future research should have a range of measures to assess empathy, including observational measures, and look for multiple informants (like parents, teachers and the self).

Future studies should include emotional regulation, including cognitive aspects (such as emotion recognition and perspective-taking) and affective aspects (such as excessive worry and the ability to manage personal distress). One of the best methods for assessing emotional regulation

may be through measures of physiological reactions to concrete situations that induce personal stress. Finally, even though affective, and cognitive empathy are the most used dimensions of empathy, future studies could consider other empathy dimensions such as behaviour ones or the Bray's et al. (2021) perspective accounting with the four components.

Declaration of conflicting of interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This research was supported by Portuguese national funds through FCT – Fundação para a Ciência e a Tecnologia (UID/PSI/04810/2019).

Authors contribution

All the authors contributed equally to this work.

All the authors read and approved the final manuscript.

References

- Alvi, T., Kouros, C. D., Lee, J., Fulford, D., & Tabak, B. A. (2020). Social anxiety is negatively associated with theory of mind and empathic accuracy. *Journal of Abnormal Psychology, 129*, 108-113. <https://doi.org/10.1037/abn0000493>
- Amstadter, A. (2008). Emotion regulation and anxiety disorders. *Journal of Anxiety Disorders, 22*(2), 211-221. <https://doi.org/10.1016/j.janxdis.2007.02.004>
- Aronfreed, J. (1970). The socialization of altruistic and sympathetic behavior: Some theoretical and experimental analyses. In J. Macauley & L. Berkowitz (Eds.), *Altruism and helping behavior* (pp. 103-126). Academic Press.
- Barnett, M. A., & Thompson, S. (1985). The role of perspective taking and empathy in children's Machiavellianism, prosocial behavior, and motive for helping. *The Journal of Genetic Psychology: Research and Theory on Human Development, 146*(3), 295-305. <https://doi.org/10.1080/00221325.1985.9914459>
- Batson, C. D., & Coke, J. S. (1981). Empathy: A source of altruistic motivation for helping? In J. P. Rushton & R. M. Sorrentino (Eds.), *Altruism and helping behavior: Social, personality, and developmental perspectives* (pp. 167-211). Erlbaum.
- Belacchi, C., & Farina, E. (2012). Feeling and thinking of others: Affective and cognitive empathy and emotion comprehension in prosocial/hostile preschoolers. *Aggressive Behavior, 38*(2), 150-165. <https://doi.org/10.1002/ab.21415>
- Blair, R. J. (2005). Responding to the emotions of others: Dissociating forms of empathy through the study of typical and psychiatric populations. *Consciousness and Cognition, 14*(4), 698-718. <https://doi.org/10.1016/j.concog.2005.06.004>
- Bray, K. O., Anderson, V., Pantelis, C., Pozzi, E., Schwartz, O. S., Vijayakumar, N., Richmond, S., Deane, C., Allen, N. B., & Whittle, S. (2021). Associations between cognitive and affective empathy and internalizing

- symptoms in late childhood. *Journal of Affective Disorders*, 290, 245-253. <https://doi.org/10.1016/j.jad.2021.04.034>
- Brazil, K. J., Volk, A. A., & Dane, A. V. (2023). Is empathy linked to prosocial and antisocial traits and behavior? It depends on the form of empathy. *Canadian Journal of Behavioural Science/Revue Canadienne des Sciences du Comportement*, 55(1), 75-80. <https://doi.org/10.1037/cbs0000330>
- Broidy, L. M., Nagin, D. S., Tremblay, R. E., Bates, J. E., Brame, B., Dodge, K. A., Fergusson, D., Horwood, J. L., Loeber, R., Laird, R., Lynam, D. R., Moffitt, T. E., Pettit, G. S., & Vitaro, F. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology*, 39(2), 222-245. <https://doi.org/10.1037/0012-1649.39.2.222>
- Bush, C. A., Mullis, R. L., & Mullis, A. K. (2000). Differences between offender and nonoffender youth. *Journal of Youth and Adolescence*, 29, 467-478. <https://doi.org/10.1023/A:1005162526769>
- Campbell, S. B., Spieker, S., Burchinal, M., Poe, M. D., & NICHD Early Child Care Research Network. (2006). Trajectories of aggression from toddlerhood to age 9 predict academic and social functioning through age 12. *Journal of Child Psychology and Psychiatry*, 47(8), 791-800. <https://doi.org/10.1111/j.1469-7610.2006.01636.x>
- Cherewick, M., Schmiede, S., Hipp, E., Leiferman, J., Njau, P., & Dahl, R. E. (2022). A developmental analysis of dimensions of empathy during early adolescence: Behavioral empathy but not cognitive empathy is associated with lower psychopathology. *PLOS Global Public Health*, 2(11), e0001231. <https://doi.org/10.1371/journal.pgph.0001231>
- Davidov, M., Zahn-Waxler, C., Roth-Hanania, R., & Knafo, A. (2013). Concern for others in the first year of life: Theory, evidence, and avenues for research. *Child Development Perspectives*, 7, 126-131. <https://doi.org/10.1111/cdep.12028>
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126. <https://doi.org/10.1037/0022-3514.44.1.113>
- Decety, J. (2010). The neurodevelopment of empathy in humans. *Developmental Neuroscience*, 32(4), 257-267. <https://doi.org/10.1159/000317771>
- Decety, J., Meidenbauer, K. L., & Cowell, J. M. (2018). The development of cognitive empathy and concern in preschool children: A behavioral neuroscience investigation. *Developmental Science*, 21(3). <https://doi.org/10.1111/desc.12570>
- Decety, J., Bartal, I. B. A., Uzefovsky, F., & Knafo-Noam, A. (2016). Empathy as a driver of prosocial behaviour: Highly conserved neurobehavioural mechanisms across species. *Philosophical Transactions of the Royal Society B: Biological Science*, 371(1686). <https://doi.org/10.1098/rstb.2015.0077>
- Decety, J., & Yoder, K. J. (2016). Empathy and motivation for justice: Cognitive empathy and concern, but not emotional empathy, predict sensitivity to injustice for others. *Social Neuroscience*, 11(1), 1-14. <https://doi.org/10.1080/17470919.2015.1029593>
- Derntl, B., Seidel, E. M., Schneider, F., & Habel, U. (2012). How specific are emotional deficits? A comparison of empathic abilities in schizophrenia, bipolar and depressed patients. *Schizophrenia Research*, 142(1-3), 58-64. <https://doi.org/10.1016/j.schres.2012.09.020>
- Devine, R. T., & Hughes, C. (2016). Measuring theory of mind across middle childhood: Reliability and validity of the silent films and strange stories tasks. *Journal of Experimental Child Psychology*, 149, 23-40. <https://doi.org/10.1016/j.jecp.2015.07.011>
- Diego, M. A., & Jones, N. A. (2007). Neonatal antecedents for empathy. In T. F. D. Farrow & P. W. R. Woodruff (Eds.), *Empathy in mental illness* (pp. 145-167). Cambridge University Press. <https://doi.org/10.1017/CBO9780511543753.010>

- Dunfield, K., Kuhlmeier, V. A., O'Connell, L., & Kelley, E. (2011). Examining the diversity of prosocial behavior: Helping, sharing, and comforting in infancy. *Infancy, 16*(3), 227-247. <https://doi.org/10.1111/j.1532-7078.2010.00041>
- Ehring, T., Tuschen-Caffier, B., Schnülle, J., Fischer, S., & Gross, J. J. (2010). Emotion regulation and vulnerability to depression: Spontaneous *versus* instructed use of emotion suppression and reappraisal. *Emotion, 10*(4), 563. <https://doi.org/10.1037/a0019010>
- Eisenberg, N. (2000). Emotion, regulation, and moral development. *Annual Review of Psychology, 51*, 665-697. <https://doi.org/10.1146/annurev.psych.51.1.665>
- Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion, 14*(2), 131-149. <https://doi.org/10.1007/BF00991640>
- Eisenberg, N., & Fabes, R. A. (1998). Prosocial development. In W. Damon & N. Eisenberg (Eds.), *Social emotional and personality development* (5th ed, Vol. 3, pp. 779-862). Wiley.
- Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin, 101*(1), 91-119. <https://doi.org/10.1037/0033-2909.101.1.91>
- Engelen, E. M., & Röttger-Rössler, B. (2012). Current disciplinary and interdisciplinary debates on empathy. *Emotion Review, 4*(1), 3-8. <https://doi.org/10.1177/1754073911422287>
- Fanti, K. A., & Henrich, C. C. (2010). Trajectories of pure and co-occurring internalizing and externalizing problems from age 2 to age 12: Findings from the National Institute of Child Health and Human Development Study of Early Child Care. *Developmental Psychology, 46*(5), 1159. <https://doi.org/10.1037/a0020659>
- Farrington, D. P. (1998). Predictors, causes, and correlates of male youth violence. In M. Tonry & M. H. Moore (Eds.), *Youth violence* (pp. 421-475). University of Chicago Press.
- Feshbach, N. D. (1978). Studies of empathic behavior in children. In B. A. Maher (Ed.), *Progress in experimental personality research* (Vol. 8, pp. 1-47). Academic Press.
- Flouri, E., & Sarmadi, Z. (2016). Prosocial behavior and childhood trajectories of internalizing and externalizing problems: The role of neighborhood and school contexts. *Developmental Psychology, 52*(2), 253-258. <https://doi.org/10.1037/dev0000076>
- Gambin, M., & Sharp, C. (2016). The differential relations between empathy and internalizing and externalizing symptoms in inpatient adolescents. *Child Psychiatry and Human Development, 47*(6), 966-974. <https://doi.org/10.1007/s10578-016-0625-8>
- Gambin, M., & Sharp, C. (2018). Relations between empathy and anxiety dimensions in inpatient adolescents. *Anxiety Stress Coping, 31*(4), 447-458. <https://doi.org/10.1080/10615806.2018.1475868>
- Gawronski, I., & Privette, G. (1997). Empathy and reactive depression. *Psychological Reports, 80*(3), 1043-1049. <https://doi.org/10.2466/pr0.1997.80.3.1043>
- Gini, G., Albiero, P., & Benelli, B. (2005). Relazione tra bullismo, empatia, e autoefficacia percepita in un campione di adolescenti [Relationship between bullying, empathy, and perceived self-efficacy in a sample of adolescents]. *Psicologia Clinica dello Sviluppo, 3*, 457-472. <https://doi.org/10.1449/21191>
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry, 38*(5), 581-586. <https://doi.org/10.1111/j.1469-7610.1997.tb01545.x>
- Goodman, A., Lamping, D. L., & Ploubidis, G. B. (2010). When to use broader internalising and externalising subscales instead of the hypothesised five subscales on the strengths and difficulties questionnaire (SDQ): Data from British parents, teachers and children. *Journal of Abnormal Child Psychology, 38*(8), 1179-1191. <https://doi.org/10.1007/s10802-010-9434-x>
- Greenberg, D. M., Baron-Cohen, S., Rosenberg, N., Fonagy, P., & Rentfrow, P. J. (2018). Elevated empathy in adults following childhood trauma. *PLOS ONE, 13*. <https://doi.org/10.1371/journal.pone.0203886>

- Hoffman, M. L. (1984). Interaction of affect and cognition in empathy. In C. E. Izard et al. (Eds.), *Emotions, cognition, and behavior* (pp. 103-131). Cambridge University Press.
- Hutman, T., & Dapretto, M. (2009). The emergence of empathy during infancy. *Cognition, Brain, Behavior: An Interdisciplinary Journal*, *13*(4), 367-390.
- Knafo, A., Zahn-Waxler, C., Van Hulle, C., Robinson, J. A. L., & Rhee, S. H. (2008). The developmental origins of a disposition toward empathy: Genetic and environmental contributions. *Emotion*, *8*(6), 737-752. <https://doi.org/10.1037/a0014179>
- Lamm, C., Batson, C. D., & Decety, J. (2007). The neural substrate of human empathy: Effects of perspective-taking and cognitive appraisal. *Journal of Cognitive Neuroscience*, *19*(1), 42-58. <https://doi.org/10.1162/jocn.2007.19.1.42>
- Lee, S. A. (2009). Does empathy mediate the relationship between neuroticism and depressive symptomatology among college students?. *Personality and Individual Differences*, *47*(5), 429-433. <https://doi.org/10.1016/j.paid.2009.04.020>
- Lindsey, R. E., Carlozzi, A. F., & Eells, G. T. (2001). Differences in the dispositional empathy of juvenile sex offenders, non-sex-offending delinquent juveniles, and nondelinquent juveniles. *Journal of Interpersonal Violence*, *16*(6), 510-522. <https://doi.org/10.1177/088626001016006002>
- Lo Cricchio, M. G., Musso, P., Lo Coco, A., Cassibba, R., & Liga, F. (2022). The relation between empathy and aggression: The role of attachment style. *Europe's Journal of Psychology*, *18*(3), 319-336. <https://doi.org/10.5964/ejop.4509>
- Lovett, B. J., & Sheffield, R. A., (2007). Affective empathy deficits in aggressive children and adolescents: A critical review. *Clinical Psychology Review*, *27*, 1-13. <https://doi.org/10.1016/j.cpr.2006.03.003>
- MacDonald, H. Z., & Price, J. L. (2019). The role of emotion regulation in the relationship between empathy and internalizing symptoms in college students. *Mental Health and Prevention*, *13*, 43-49. <https://doi.org/10.1016/j.mhp.2018.11.004>
- Miller, P. A., & Eisenberg, N. (1998). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, *103*, 324-344. <https://doi.org/10.1037/0033-2909.103.3.324>
- Nagin, D., & Tremblay, R. E. (1999). Trajectories of boys' physical aggression, opposition, and hyperactivity on the path to physically violent and nonviolent juvenile delinquency. *Child Development*, *70*(5), 1181-1196. <https://doi.org/10.1111/1467-8624.00086>
- Nantel-Vivier, A., Pihl, R. O., Côté, S., & Tremblay, R. E. (2014). Developmental association of prosocial behaviour with aggression, anxiety and depression from infancy to preadolescence. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, *55*(10), 1135-1144. <https://doi.org/10.1111/jcpp.12235>
- O'Connor, L. E., Berry, J. W., Lewis, T. B., & Stiver, D. J. (2012). Empathy-based pathogenic guilt, pathological altruism, and psychopathology. In B. Oakley, A. Knafo, G. Madhavan, & D. S. Wilson (Eds.), *Pathological altruism* (pp. 10-30). Oxford University Press.
- O'Connor, L., Berry, J., Weiss, J., & Gilbert, P. (2002). Guilt, fear, submission, and empathy in depression. *Journal of Affective Disorder*, *71*, 13-19. [https://doi.org/10.1016/s0165-0327\(01\)00408-6](https://doi.org/10.1016/s0165-0327(01)00408-6)
- Olweus, D., & Endresen, I. M. (1998). The importance of sex-of-stimulus object: Age trends and sex differences in empathic responsiveness. *Social Development*, *7*(3), 370-388. <https://doi.org/10.1111/1467-9507.00073>
- Peterson, L. (1982). Altruism and the development of internal control: An integrative model. *Merrill-Palmer Quarterly*, *28*, 197-222.
- Robins, C. J., & Hinkley, K. (1989). Social-cognitive processing and depressive symptoms in children: A comparison of measures. *Journal of Abnormal Child Psychology*, *17*, 29-36. <https://doi.org/10.1007/BF00910768>

- Schieman, S., & Turner, H. A. (2001). "When feeling other people's pain hurts": The influence of psychosocial resources on the association between self-reported empathy and depressive symptoms. *Social Psychology Quarterly*, *64*, 376-389. <https://doi.org/10.2307/3090161>
- Schneider, D., Regenbogen, C., Kellermann, T., Finkelmeyer, A., Kohn, N., Derntl, B., Schneider, F., & Habel, U. (2012). Empathic behavioral and physiological responses to dynamic stimuli in depression. *Psychiatry Research*, *200*(2-3), 294-305. <https://doi.org/10.1016/j.psychres.2012.03.054>
- Schreiter, S., Pijnenborg, G. H. M., & aan het Rot, M. (2013). Empathy in adults with clinical or subclinical depressive symptoms. *Journal of Affective Disorder*, *150*, 1-16. <https://doi.org/10.1016/j.jad.2013.03.009>
- Schwenck, C., Göhle, B., Hauf, J., Warnke, A., Freitag, C. M., & Schneider, W. (2014). Cognitive and emotional empathy in typically developing children: The influence of age, gender, and intelligence. *European Journal of Developmental Psychology*, *11*(1), 63-76. <https://doi.org/10.1080/17405629.2013.808994>
- Schwenck, C., Mergenthaler, J., Keller, K., Zech, J., Salehi, S., & Taurines, R. (2012). Empathy in children with autism and conduct disorder: Group-specific profiles and developmental aspects. *The Journal of Child Psychology and Psychiatry*, *53*, 651-659. <https://doi.org/10.1111/j.1469-7610.2011.02499.x>
- Sesso, G., Brancati, G. E., Fantozzi, P., Inguaggiato, E., Milone, A., & Masi, G. (2021). Measures of empathy in children and adolescents: A systematic review of questionnaires. *World Journal of Psychiatry*, *11*(10), 876. <https://doi.org/10.5498/wjp.v11.i10.876>
- Shaw, D. S., Gilliom, M., Ingoldsby, E. M., & Nagin, D. S. (2003). Trajectories leading to school-age conduct problems. *Developmental Psychology*, *39*(2), 189. <https://doi.org/10.1037/0012-1649.39.2.189>
- Shu, J., Hassell, S., Weber, J., Ochsner, K. N., & Mobbs, D. (2017). The role of empathy in experiencing vicarious anxiety. *Journal of Experimental Psychology: General*, *146*, 1164-1188. <https://doi.org/10.1037/xge0000335>
- Silton, N. R., & Fogel, J. (2010). Religiosity, empathy, and psychopathology among young adult children of rabbis. *Archive for the Psychology of Religion*, *32*(3), 277-291. <https://doi.org/10.1163/157361210X532040>
- Ştefan, 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>
- Sterzer, P., Stadler, C., Poustka, F., & Kleinschmidt, A. (2007). A structural neural deficit in adolescents with conduct disorder and its association with lack of empathy. *Neuroimage*, *37*, 335-342. <https://doi.org/10.1016/j.neuroimage.2007.04.043>
- Telle, N. T., & Pfister, H. R. (2016). Positive empathy and prosocial behavior: A neglected link. *Emotion Review*, *8*(2), 154-163. <https://doi.org/10.1177/1754073915586817>
- Thoma, P., Zalewski, I., von Reventlow, H. G., Norra, C., Juckel, G., & Daum, I. (2011). Cognitive and affective empathy in depression linked to executive control. *Psychiatry Research*, *189*, 373-378. <https://doi.org/10.1016/j.psychres.2011.07.030>
- Tibi-Elhanany, Y., & Shamay-Tsoory, S. G. (2011). Social cognition in social anxiety: First evidence for increased empathic abilities. *Israel Journal of Psychiatry and Related Sciences*, *48*(2), 98-106.
- Tone, E. B., & Tully, E. C. (2014). Empathy as a risky strength: A multilevel examination of empathy and risk for internalizing disorders. *Development and Psychopathology*, *26*, 1547-1565. <https://doi.org/10.1017/S0954579414001199>
- Underwood, B., & Moore, B. (1982). Perspective-taking and altruism. *Psychological Bulletin*, *91*(1), 143. <https://doi.org/10.1037/0033-2909.91.1.143>
- Vachon, D. D., Lynam, D. R., & Johnson, J. A. (2014). The (non) relation between empathy and aggression: Surprising results from a meta-analysis. *Psychological Bulletin*, *140*(3), 751. <https://doi.org/10.1037/a0035236>
- Veiga, F. H., & Santos, E. (2011). Uma escala de avaliação da empatia: Adaptação portuguesa do Questionnaire to Assess Affective and Cognitive Empathy. In A. S. Ferreira et al. (Eds.), *Actas do VIII Congresso*

- Vossen, H. G. M., Piotrowski, J. T., & Valkenburg, P. M. (2015). Development of the adolescent measure of empathy and sympathy (AMES). *Personality and Individual Differences, 74*(1), 66-71. <https://doi.org/10.1016/j.paid.2014.09.040>
- Washburn, D., Wilson, G. A., Roes, M., Rnic, K., & Harkness, K. L. (2016). Theory of mind in social anxiety disorder, depression, and comorbid conditions. *Journal of Anxiety Disorder, 37*, 71-77. <https://doi.org/10.1016/j.janxdis.2015.11.004>
- Watters, E. R., & Wojciak, A. S. (2020). Childhood abuse and internalizing symptoms: Exploring mediating & moderating role of attachment, competency, and self-regulation. *Children and Youth Services Review, 117*, 105305. <https://doi.org/10.1016/j.childyouth.2020.105305>
- Wei, M., Vogel, D. L., Ku, T.-Y., & Zakalik, R. A. (2005). Adult Attachment, affect regulation, negative mood, and interpersonal problems: The mediating roles of emotional reactivity and emotional cutoff. *Journal of Counseling Psychology, 52*, 14-24. <https://doi.org/10.1037/0022-0167.52.1.14>
- Williams, A., O'Driscoll, K., & Moore, C. (2014). The influence of empathic concern on prosocial behavior in children. *Frontiers Psychology, 5*, 1-8. <https://doi.org/10.3389/fpsyg.2014.00425>
- Zahn-Waxler, C., Radke-Yarrow, M., Wagner, E., & Chapman, M. (1991). Development of concern for others. *Developmental Psychology, 28*, 126-136. <https://doi.org/10.1037/0012-1649.28.1.126>
- Zahn-Waxler, C., & Van Hulle, C. (2012). Empathy, guilt, and depression: When caring for others becomes costly to children. In B. Oakley et al. (Eds.), *Pathological altruism* (pp. 321-344). Oxford University Press.
- Zaki, J., & Ochsner, K. (2016). Empathy. In L. Feldman-Barrett et al. (Eds.), *Handbook of emotion* (4th ed., pp. 871-884). Guilford.
- Zoll, C., & Enz, S. (2010). *A questionnaire to assess affective and cognitive empathy in children*. https://www.researchgate.net/publication/242577861_A_Questionnaire_to_Assess_Affective_and_Cognitive_Empathy_in_Children

Associações entre a empatia e os comportamentos sociais em crianças

Resumo: A preocupação com o bem-estar dos outros faz parte do desenvolvimento normativo. Contudo, enquanto algumas crianças respondem à angústia dos outros com preocupação e ajuda, outras respondem com suspeita, hostilidade e indiferença. Embora a literatura em torno da empatia tenha aumentado nos últimos anos, ainda não há consenso no que respeita as suas associações com a pró-socialidade, com problemas internalizantes ou externalizantes. Numa amostra de 199 crianças (50,8% meninas) entre os 10 e os 15 anos ($M=12.05$; $DP=0.98$), foram reportados a empatia e os comportamentos sociais através do QACE – Questionnaire to Assess Affective and Cognitive Empathy (Zoll & Enz, 2010). e o SDQ – Strengths and Difficulties Questionnaire (Goodman, 1997), respetivamente. Os resultados indicam as raparigas como mais pró-sociais e empáticas, mas também com níveis mais elevados de problemas internalizantes, em comparação com os rapazes. A empatia afetiva, mas não cognitiva, foi relacionada com problemas internalizantes. A empatia cognitiva foi significativamente relacionada com o comportamento pró-social. Não foram encontradas relações significativas entre empatia e comportamentos externalizantes.

Palavras-chave: Empatia, Comportamentos internalizantes, Comportamentos externalizantes, Comportamentos pró-sociais.