Empathy in preschool Portuguese children: validation of the empathy questionnaire (EmQue)

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Empathy in preschool Portuguese children: Validation of the Empathy Questionnaire (EmQue)

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Abstract

Empathy is an important building block for social interactions, that not only allows individuals experience and understand others' affective states, but also to helpfully respond to them. Although empathy can already be observed from infancy, only one questionnaire has been specifically developed to examine young children's empathy. This study translated and validated the original Dutch Empathy Questionnaire (EmQue) into Portuguese. A total of 250 caregivers of preschool typically developed children, aged between 3 and 6 years old, participated in this study. To assess the validation, a confirmatory factor analysis (CFA) was conducted, and internal consistency and concurrent validity were tested. The outcomes confirmed that the Portuguese version of the EmQue is also organized in a three-factor structure (i.e., Emotion Contagion, Attention to Others' Feelings, and Prosocial Actions). The validation required the exclusion of five of the original items. The internal consistencies of the three EmQue scales for this Portuguese version were good. Associations between the three empathy scales with emotion recognition and prosocial behaviors were in accordance with previous research confirming concurrent validity. Divergent validity assessed

through the association of the three empathy scales with aggression was partially confirmed.

KEYWORDS
attention emotion, Emotion Contagion, empathy, preschool children, Prosocial Actions, questionnaire

1 | INTRODUCTION

Empathy is an important building block for social interaction, allowing individuals to experience, understand and respond to others' affective states, and prompting people to help and to not harm each other (Decety, 2010; Decety et al., 2016; Hoffman, 1987; Mehrabian & Epstein, 1972; Rieffe et al., 2010). This so called "social-glue of human relationships," seems to be innate in mammal species, and can be observed and assessed from birth onwards (De Waal, 2012; Decety, 2010; Hoffman, 1987). However, to date and to the best of our knowledge, only one questionnaire has been specifically developed to examine young children's empathy, identifying the different components of which empathy consists (Rieffe et al., 2010).

The Empathy Questionnaire (EmQue) is a parent-report questionnaire that was designed to observe three facets of empathy in young children's behaviors: Emotion Contagion, Attention to Others' Feelings, and Prosocial Actions (EmQue; Rieffe et al., 2010). The first facet, Emotion Contagion, also referred to as affective empathy, is already present in the first year of life, and involves the automatic imitation and synchronization with the emotional manifestation of another person's emotional state (Decety, 2010; Hatfield et al., 1993; Hoffman, 1987; Rieffe et al., 2010). For example, babies tend to start crying after hearing another baby cry, indicating that the ability to perceive and respond to others' emotional manifestations is already present in really young children (Dondi et al., 1999). At this early age, however, children are not yet aware that their distress is caused by another child's distress, and therefore they react as if the distress caused by others is their own (Decety, 2010; Vreeke & van der Mark, 2003). Emotion contagion has been related to more prosocial actions and less anger and aggression in preschool children (see Lovett & Sheffield, 2007, for a review).

Attention to Others' Feelings starts to develop when children gain more awareness and understanding of others' emotions (Davidov et al., 2013; Rieffe et al., 2010). They progressively start to gain this awareness, which is enhanced by their increasing abilities to self-regulate their emotional arousal (Decety, 2010; Hoffman, 1987; Netten et al., 2015). Thus, children need to be able to regulate their emotions, so they can learn to differentiate between arousal caused by the distress of others and their own (Decety & Meyer, 2008; Rieffe et al., 2010). Attention to others' feelings becomes visible after 1 year of life, when children direct their attention towards others' emotional manifestations, while showing less personal distress (Hoffman, 1987; Rieffe et al., 2010). Previous studies have shown that paying attention to others' feelings allows children to develop more prosocial behaviors (Decety et al., 2016; Vaish et al., 2009; Williams et al., 2014). Furthermore, studies with clinical groups suggest that a lack of attention to others' feelings is related to difficulties in emotion recognition (Netten et al., 2015).

Prosocial Actions develop alongside the two other aspects of empathy, because only when children are able to regulate their emotions, and differentiate between personal distress and others' distress, they become capable of showing interest and concern for others' emotions (Eisenberg et al., 1996; Hoffman, 1987; Knafo et al., 2008; Zahn-Waxler et al., 1992). At this stage, which is already visible at 12 months of age, children become intrinsically motivated to act prosocially with the aim to reduce the other person's distress, by offering help, comfort, or support (Davidov et al., 2013; Decety, 2010; Decety et al., 2016; Hoffman, 1987; Williams et al., 2014; Zahn-Waxler et al., 1992). A high manifestation of prosocial actions is related to better peer acceptance and positive social interactions, and overall adaptive social–emotional functioning (Bandstra et al., 2011; Caputi et al., 2012; Eisenberg et al., 1999). On the contrary, a low prevalence of prosocial actions may lead to aggressive behaviors and peer rejection (Wardle et al., 2011).

The original EmQue was designed in Dutch, showing good psychometric properties, that is, a good three-factor structure and acceptable to good internal consistencies. Besides, the EmQue also shows a good concurrent validity, that is, the different EmQue scales are related to emotion understanding, emotion regulation, other's emotion recognition, and prosocial behavior (Rieffe et al., 2010). To date, the EmQue has been translated into different languages (i.e., Dutch, Italian, Spanish, Lithuanian, and Japanese), validated by researchers from several countries and regions (i.e., North Europe, South Europe, and East Asia) (Grazzani et al., 2016; Lazdauskas & Nasvytienė, 2020; Lucas-Molina et al., 2018; Rieffe et al., 2010; Takamatsu et al., 2021). Although some items were deleted in different languages or cultures, all studies confirmed the same three-factor structure on toddlers (Grazzani et al., 2016), preschoolers (Lucas-Molina et al., 2018), or both (Lazdauskas & Nasvytienė, 2020; Rieffe et al., 2010; Takamatsu et al., 2021). In addition, a three-factor structure of empathy is also found in studies with older children (Bensalah et al., 2016), adolescents (Overgaauw et al., 2017), and adults (Carré et al., 2013). Therefore, validation of the EmQue with the Portuguese sample might further contribute to our understanding about particularities, and similarities, of empathy development and experience across cultures.

1.1 | Present study

The aim of this study was to examine the psychometric properties of the Portuguese version of the EmQue, including its factor structure, internal consistency, and the concurrent and divergent validity. For this purpose, a fourth-step approach was followed: (1) confirmation of the three-factor structure of the original Dutch EmQue; (2) analysis of the internal consistency of the three EmQue scales: Emotion Contagion, Attention to Others' Feelings, and Prosocial Actions; (3) concurrent validity through the association of the EmQue scales with emotion recognition, and prosocial actions measures; (4) divergent validity through the association of the EmQue scales with aggression. Given the supporting evidence of a three-factor structure model across other different languages, the three-factor structure of the original Dutch version was also expected for the Portuguese sample (Grazzani et al., 2016; Lazdauskas & Nasvytienė, 2020; Lucas-Molina et al., 2018; Rieffe et al., 2010). Nevertheless, in the previous validated versions (Grazzani et al., 2016; Lazdauskas & Nasvytienė, 2020; Lucas-Molina et al., 2018; Takamatsu et al., 2021), the items included within each scale varied from the original Dutch model (Rieffe et al., 2010). Cultural differences and age group differences have been appointed as the main reasons for the differences in item selection (Grazzani et al., 2016; Takamatsu et al., 2021). Therefore, possible changes in the Portuguese version were also expected.

Concerning concurrent validity, in line with previous studies, the EmQue scale Attention to Others' Feelings was expected to be positively related to emotion recognition (Netten et al., 2015; Rieffe et al., 2010); and the EmQue scale Prosocial Actions was expected to be positively associated with emotion recognition (Rieffe et al., 2010). Besides, all three EmQue scales were expected to be positively related to prosocial behaviors (Bandstra et al., 2011; Eisenberg et al., 2006; Strayer & Roberts, 2004; Vaish et al., 2009; Williams et al., 2014). Regarding divergent validity, the EmQue scale Emotion Contagion was expected to be negatively related to aggression (Lovett & Sheffield, 2007); and the EmQue scale Prosocial Actions were expected to be negatively related to aggression (Wardle et al., 2011).

2 | METHOD

2.1 | Participants and procedure

This study included the participation of 250 caregivers of Portuguese children (137 boys, 113 girls) aged between 3 and 6 years old ($M = 62.03$ months, $SD = 9.01$). The demographics of the participants are reported in Table 1. Socioeconomic status was assessed by the level of income of the parents. According to the latest data from the Portuguese Institute of Statistics, our sample socioeconomic status was in line with the general Portuguese population (Instituto Nacional de Estatística, 2021). There were no significant differences for age and socioeconomic status between boys and girls. Children with special needs did not participate in this study.

TABLE 1 Demographic characteristics of participants

	Total ($n = 250$)	Boys ($n = 137$)	Girls ($n = 113$)
Age, mean (*SD*), month	62.03 (9.01)	61.19 (9.39)	63.04 (8.46)
Age, range, month	41–82	41–82	42–77
Socioeconomic status			
Maternal job, mean (*SD*)[a]	2.23 (.86)	2.25 (.83)	2.21 (.90)
Paternal job, mean (*SD*)	2.03 (.87)	2.02 (.87)	2.05 (.86)

[a] 1 = low income, 2 = average income, 3 = high income.

The participants were directly through preschools in the area of Lisbon and south of Portugal. In total, 10 preschools (six private and four public) participated in this study. Preschools were first contacted about the purpose and planning of the study. After the preschools confirmed their willingness to participate, they informed caregivers about the study. Both caregivers and preschools were explained about the goals and procedures of the study, how data would be handled and stored to guarantee privacy, and about the voluntary nature of their participation by the investigator. Caregivers gave their written consent and children gave their verbal informed consent before testing. Approval for the study was obtained from the ethical committee of the University of Évora and University of Lisbon, as well as from the Portuguese Commission of Data Protection and Portuguese Ministry of Education. The collected data were fully encrypted to ensure the privacy of the participants.

All the participating caregivers filled out two questionnaires (EmQue and the Strengths and Difficulties Questionnaires, SDQ). One additional questionnaire (Aggressive Behaviors Questionnaire) was filled out by 170 caregivers. The difference in sample size occurred because this questionnaire was not applied at an initial stage of the data collection. Furthermore, 191 children performed tasks, which measured their emotion recognition. The difference in sample size occurred because some children were absent on the day of data collection at their preschool.

With the exception of the SDQ, which was already translated to Portuguese, all measures used in this study were available in Dutch and/or in English. The Dutch or English versions of the instruments were translated into Portuguese using the back-translation method, performed by bilingual translators. The back-translated versions were compared and checked for language consistency with the original versions.

2.2 | Measures

Empathy was measured by the EmQue (Rieffe et al., 2010). This 20-item caregiver-report questionnaire is comprised by 20 items representing three scales that measure empathy (see Table 2): Emotion Contagion (eight items), Attention to Others' Feelings (seven items), and Prosocial Actions (six items). Caregivers were asked to rate the prevalence of each described behavior in their child, over the past 2 months in a 5-point scale (1 = (almost) never, 2 = rarely, 3 = sometimes, 4 = very often, 5 = (almost) always. Higher scores correspond to higher levels of empathy.

Emotion recognition was assessed through eight emotion-attribution tasks (Veiga et al., 2017; Wiefferink et al., 2013) in which the child had to identify how a character felt in prototypical emotion-evoking vignettes (two per basic emotion: happiness, anger, sadness, and fear). Children were tested individually by a researcher, in a quiet room of the preschool. The answer was considered correct when the child named an emotion in the intended valence (1 = incorrect valence, 2 = correct valence), either negative (anger, sadness, fear, or undifferentiated negative), or positive (happiness or positive in general). Higher scores correspond to better emotion recognition. This scale showed acceptable reliability ($\alpha = .61$) (see Table 3).

TABLE 2 Items of the Empathy Questionnaire (EmQue) (Rieffe et al., 2010)

Emotion Contagion	
1	When another child cries, my child gets upset too
4	My child also needs to be comforted when another child is in pain
7	When another child makes a bad fall, shortly after my child pretends to fall too
10	When another child is upset, my child needs to be comforted too
13	When another child gets frightened, my child freezes or starts to cry
16	When other children argue, my child gets upset
19	When another child cries, my child looks away
Attention to Others' Feelings	
3	When my child sees other children laughing, he/she starts laughing too
6	When an adult gets angry with another child, my child watches attentively
9	My child looks up when another child laughs
12	When adults laugh, my child tries to get near them
15	My child looks up when another child cries
18	When another child is angry, my child stops his own play to watch
20	When other children quarrel, my child wants to see what is going on
Prosocial Actions	
2	When I make clear that I want some peace and quiet, my child tries not to bother me
5	When another child starts to cry, my child tries to comfort him/her
8	When another child gets upset, my child tries to cheer him/her up
11	When I make clear that I want to do something by myself (e.g., read), my child leaves me alone for a while
14	When two children are quarreling, my child tries to stop them
17	When another child gets frightened, my child tries to help him/her

Prosocial behavior was obtained through the 5-item prosocial behavior scale of the Portuguese version of the SDQ (Goodman, 1997). Caregivers were asked to rate children's prosocial behaviors in the last 2 months (e.g., "Helpful if someone is hurt, upset or feeling ill," "Kind to younger children."), on a 3-point scale (1 = not true, 2 = somewhat true, 3 = certainly true). Higher scores correspond to a higher prevalence of prosocial behavior. This scale showed acceptable reliability ($\alpha = .66$) (see Table 3).

Aggression was measured through the Aggressive Behaviors Questionnaire (Dodge & Coie, 1987; Veiga et al., 2017), which comprises reactive aggression (three items; e.g., "Reacts aggressively after being teased," "Blames other children for the fights") and proactive aggression (three items; e.g., "Threatens or hits other children," "Makes other children turn against one child") items. Caregivers were asked to rate the prevalence of each described behavior over the past 2 months, in a 5-point scale (1 = (almost) never, 2 = rarely, 3 = sometimes, 4 = very often, 5 = (almost) always). Higher scores correspond to higher levels of aggression. The questionnaire showed a good reliability ($\alpha = .76$) (see Table 3).

2.3 | Statistical analyses

Firstly, and prior to conducting our analyses, the previous validated versions (Grazzani et al., 2016; Lazdauskas & Nasvytienė, 2020; Lucas-Molina et al., 2018; Rieffe et al., 2010; Takamatsu et al., 2021) were tested in our sample.

TABLE 3 Descriptives and internal consistencies of the Empathy Questionnaire (EmQue) scales, emotion recognition, prosocial behavior, and aggression

		No. participants									
			By age				By gender				
	No. items	Total	3yo	4yo	5yo	6yo	Masculine	Feminine	Mean (*SD*)	Cronbach's Alpha	Interitem correlation
EmQue											
Emotion Contagion (1–5)	5	249	16	76	119	38	136	113	2.42 (.71)	.76	.39
Attention to Others' Feelings (1–5)	5	249	16	76	119	38	136	113	3.43 (.73)	.81	.25
Prosocial Actions (1–5)	4	249	16	76	119	38	136	113	3.10 (.79)	.82	.54
Emotion recognition (1–2)	8	191	6	65	90	30	105	86	1.96 (.11)	.61	.16
Prosocial behavior (1–3)	5	246	14	75	119	38	136	110	2.58 (.35)	.66	.29
Aggression (1–5)	6	170	16	71	70	13	100	70	1.89(.57)	.76	.35

TABLE 4 Results of the confirmatory factor analysis

	$\chi 2$/df	RMSEA	CFI	TLI
Model 1 (Original 20-item model)	1.864	.063 [.052, .073]	.824	.800
Model 2 (15-item model)	1.649	.054 [.037, .069]	.921	.904

None of the models showed an acceptable fit (see supplemental online Appendix A). Therefore, we designated the original Dutch version as our baseline model, and proceeded with a confirmatory factor analysis (CFA) to find a model suitable for the Portuguese sample. Due to non-normality of the data and the categorical nature of the EmQue data, the weighted least-squares means and variance adjusted (WLSMV) estimation was used (Brown, 2006). Several model fit indices were used to examine the goodness of fit of the model. For this purpose, we used the $\chi 2/df < 3.0$ (Bollen, 1989), the Comparative Fit Index (CFI) > .90 (Bollen, 1989), the Tucker–Lewis Index (TLI) ≥ .90 (Bentler & Bonett, 1980; Lucas-Molina et al., 2018), and the Root-Mean-Square Error of Approximation (RMSEA) < .08 (Hu & Bentler, 1999). Interfactor correlations were also computed to demonstrate diversity between the scales. Secondly, in order to assess whether age was related to the EmQue scales, we conducted Pearsons' correlations. As significant correlations were found for age with the scales Attention to Others' Feelings (negative; $r = -.13$; $p < .05$) and Prosocial Actions (positive; $r = .13$; $p < .05$), partial correlations corrected for age were also performed. Thirdly, we assessed the internal consistencies and interitem correlations of the scales using Cronbach's alpha. Fourth, concurrent validity was examined through the associations between the EmQue scales and the Emotion recognition tasks, and the Prosocial behaviors scale of the SDQ. Lastly, divergent validity was examined through the associations between the EmQue scales and the Aggressive Behaviors Questionnaire.

3 | RESULTS

The CFA with the original 20-item model of the EmQue indicated a poor fit (Table 4). To improve the model, items with factor loading below .40 were considered for deletion one by one, whereby the content of the item was considered in the context of the intended factor. Following this step-wise procedure, items 19, 2, 11, 7, and 3 were excluded sequentially, resulting in Model 2 with a total of 15 remaining items (Figure 1). Model 2 showed a robust goodness of fit, with all the fit indices values reaching the desired cut-off points ($\chi 2/df = 1.649$; RMSEA = .054; CFI = .921; TLI = .904). In this final model, the Emotion Contagion scale was comprised by five items, the Attention to Others' Feelings scale was comprised by six items, and the Prosocial Actions scale was comprised by four items. The internal consistencies and interitem correlation coefficients for the three EmQue scales are reported in Table 3. All three scales showed good psychometric properties after item deletion. Cronbach's α of the Portuguese version of the EmQue (.79 for emotional contagion; .81 for Attention to Others' Feelings; and .82 for Prosocial Actions) was within the same range as the previous validated versions in Dutch (αs = .58–.80; Rieffe et al., 2010), Italian (αs = .73–.80; Grazzani et al., 2016), Spanish (αs = .60–.83; Lucas-Molina et al., 2018), Lithuanian (αs = .70–.83; Lazdauskas & Nasvytienė, 2020), and Japanese (αs = .74–.84; Takamatsu et al., 2021).

The correlations between the EmQue scales Emotion Contagion × Attention to Others' Feelings ($r = .38$; $p < .01$); Emotion Contagion × Prosocial Actions ($r = .42$; $p < .01$); and Attention to Others' Feelings × Prosocial Actions ($r = .41$; $p < .01$) showed that the scales were positively related to each other, although not to a level that suggests collinearity.

Regarding concurrent validity, the EmQue scales Attention to Others' Feelings and Prosocial Actions were positively related to Emotion recognition. All the three EmQue scales were positively related to prosocial behaviors (Table 5). Concerning divergent validity, only the Prosocial Actions scale was negatively related to aggression (Table 5).

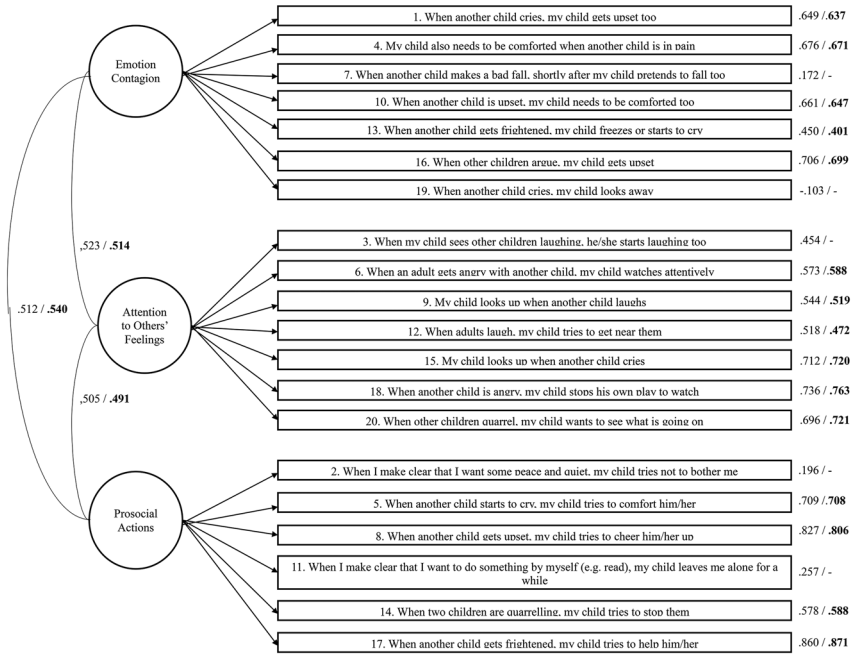

FIGURE 1 Confirmatory factor analysis (CFA) of the three-factor structure of the Empathy Questionnaire (EmQue) (Original/Portuguese Model)

TABLE 5 Correlations of the Empathy Questionnaire (EmQue) scales with indices for emotion recognition, prosocial behaviors, and aggression corrected for age

	Emotion recognition ($n = 190$)	Prosocial behavior ($n = 245$)	Aggression ($n = 170$)
EmQue – Contagion	.112	.324**	.094
EmQue – Attention to others' feelings	.274**	.241**	.061
EmQue – Prosocial Actions	.263**	.495**	−.181*

*$p < .05$.
**$p < .01$.

4 | DISCUSSION

The outcomes of the psychometric properties of the EmQue translation into Portuguese showed that after removing five items, a solid 15-item scale (i.e., Emotion Contagion, Attention to Others' Feelings, and Prosocial Actions). The internal consistencies of the three EmQue scales for this Portuguese version were good.

In line with the original questionnaire (Rieffe et al., 2010), the Portuguese version of the EmQue is also organized in a three-factor structure. However, due to empirical–numerical reasons, the Portuguese version required excluding five items. Considering that all previous validated versions showed a reduction of items from the original Dutch model, item reduction was also expected for this Portuguese version. Similarly, to the original Dutch model, and all the previous versions, item 19 was excluded. Contrary to the other items in the EmQue, this item does not reflect an empathic behavior, which might explain the low factor loading. Compared with the previous validations (Grazzani et al., 2016; Lucas-Molina et al., 2018; Rieffe et al., 2010; Takamatsu et al., 2021), our participants were relatively old, which might explain the low factor loading of items 3 and item 7. Although the youngest children in our sample were 3 years of

age, the mean age of our participants was 5 years old ($M = 62.03$ months, $SD = 9.01$; range: 41–82 months) (Table 1). The two excluded items (3 and 7) describe an automatic imitation and synchronization with the emotional manifestation of someone else, which is observed in younger children, but is usually not appropriate for older preschoolers (Decety et al., 2016; Hatfield et al., 1993; Hoffman, 1987; Rieffe et al., 2010). Preschoolers, especially the older ones, are already aware that their distress is caused by someone else's distress, and therefore tend not to be as contagious to others' emotions, as younger children (Decety, 2010; Hoffman, 1987; Netten et al., 2015). Furthermore, two items (i.e., items 2 and 11) that focused on the parents not being disturbed, were removed from the prosocial action scale. The low factor loading of these two items might be related to different parenting styles of Portuguese parents, compared with the Dutch parents who were included in the original validation. North European parents (e.g., Dutch parents) are generally reported to be more distant and value their children's autonomy, compared with South European parents (Nunes et al., 2014). This rationale is in line with the Italian (Grazzani et al., 2016) and Spanish (Lucas-Molina et al., 2018) validations of this questionnaire, in which these two parenting-related items were also excluded. Relationships were found between age and the scales Attention to Others' Feelings (negative) and Prosocial Actions (positive). The negative relation between age and Attention to Others' Feelings might be related to the relatively older age of our participants. In terms of development, attention to others' feelings usually becomes visible after 1 year of life (Hoffman, 1987; Rieffe et al., 2010), whereby children pause their own play or activity, to observe the distressed person. The items used in the EmQue scale Attention to Others' Feelings reflect these observational behaviors, suited for toddlers and young preschoolers. However, in older preschoolers, as was the case in our study, prosocial actions are more common. Rather than just observing, older children more often want to comfort and thus approach the distressed person (Decety et al., 2016).

The concurrent validity of the three scales of the EmQue was also good and in line with previous studies. Emotion Contagion, Attention to Others' Feelings, and Prosocial Actions were related to more frequent prosocial behaviors (Eisenberg et al., 2006; Strayer & Roberts, 2004; Vaish et al., 2009; Williams et al., 2014). The ability to pay attention to others' feelings was related to a better emotion recognition (Netten et al., 2015; Rieffe et al., 2010). Furthermore, prosocial actions were related to better emotion recognition (Rieffe et al., 2010). Concerning divergent validity, the relations partially confirmed our hypotheses. As expected, prosocial actions were related to less aggression (Wardle et al., 2011), however, no relation was found between emotion contagion and aggression.

The lack of a relationship between emotion contagion and aggression was unexpected. Although the review paper by Lovett and Sheffield (2007) showed less aggression in adolescents who score higher on contagion (affective empathy), based on which we made the hypothesis on this relationship, it should be noted that this relationship was mainly examined among adolescents and remained unclear in younger children. During the toddlerhood and preschool years, the skill for emotion regulation improves (see Waxman et al., 2014, for a review on inhibitory control). Yet, this development might initially be bound to social rules posed on children concerning their observable behaviors, such as not hitting others. Therefore, the internal locus of control might be less well developed. at the preschool age, compared with the control of external behaviors. Given that Emotion Contagion involves children's control over their internal level of arousal when observing a distressed other, it is possibly more related to an internalized dysregulation rather than to aggression, while in this study, only the latter was measured. Future studies could further investigate this assumption and examine the extent to which internalizing, dysregulated emotions might be related to levels of contagion and aggression at different ages.

We also want to note three limitations of this study that might be addressed in future studies. Firstly, parents were our only informants regarding their children's manifestations of empathic behaviors. This implies that only observable aspects of empathy were reported, which may not truly translate how the child feels, as some aspects of empathy are not necessarily externalized. Additionally, children might behave differently with less familiar others, like at their daycare. Secondly, concurrent validity should also address the relation of the three facets of empathy with internalizing behaviors, or a more comprehensive measure of emotion regulation. As previously mentioned, preschoolers' emotion dysregulation may be more internalized than externalized; however, only the latter was addressed in the current study. Therefore, a measure of internalizing behaviors would further improve the divergent validity of the EmQue. Thirdly,

our study only included preschool-aged children, which prevent us from assessing the validity of the EmQue in Portuguese children across different stages of childhood. Therefore, future studies regarding the Portuguese population should also explore the validity of this instrument for toddlers, providing a deeper understanding of the development of the three facets of empathy, and the assumptions made regarding emotion contagion. The present study showed that the EmQue is a valid questionnaire that can be used in Portugal for clinical and research assessments. The EmQue has shown validity in the evaluation of empathy in different languages, and cultures (Grazzani et al., 2016; Lazdauskas & Nasvytienė, 2020; Lucas-Molina et al., 2018; Rieffe et al., 2010; Takamatsu et al., 2021). Aspects such as parenting styles and social norms are interrelated with the development of empathy (Trommsdorff, 1995), and these might in different cultures. Therefore, the EmQue might further contribute to the understanding, and the comparison of the factors that influence the empathic experiences of individuals across countries. The EmQue is an easy-to-apply questionnaire that can distinguish the three levels of empathy that are manifested in early childhood. Given the lack of studies on the empathy of Portuguese preschool children, the EmQue will allow a better understanding of young Portuguese children's emotional development with typical and atypical development. Nonetheless, future studies should examine the validation of this instrument for Portuguese toddlers, in order to expand the validity of the instrument to a wider age range.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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