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REPORT OPEN ACCESS

Associations of Shame and Guilt With Externalising Behaviour in Deaf and Hard-of-Hearing (DHH) and Hearing Children

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ABSTRACT

Moral emotions evolve during the first years of life, making children abiding by societal rules. Recent studies on young children showed that guilt and shame impact social relationships differently. Whereas guilt is associated with fewer externalising problems, the opposite seems true for shame. How these emotions affect peer-related aggression in young children had not yet been studied. We examined these relationships in 42 deaf and hard-of-hearing (DHH) and 199 hearing children (mean age 5 years, 2 months). Since these emotions rely on input from the social environment, their development might be more difficult for DHH children who often face (invisible) barriers to accessing their social surroundings. Statistical analyses revealed no group differences, but correlations confirmed differential links for shame and guilt with externalising problems and peer-related aggression. Guilt related to less peer-related aggression, whereas shame related to more reactive aggression, which suggests feelings of retaliation, thus possibly harming social relationships.

1 | Introduction

Whereas basic emotions (e.g., anger or fear) are thought to be innate or at least present in the earliest stage of life, moral emotions like guilt and shame come later in development, as they are linked to what a given society or social group maintains as morally 'right or wrong' behaviour. These kinds of moral emotions are important as they demarcate boundaries within interpersonal relationships. For example, guilt prohibits aggression towards ingroup members, whereas shame contributes to respect for social hierarchy (Dempsey 2017; Tangney et al. 2014). Yet low levels of guilt or shame are related to socially inappropriate

behaviours, such as delinquency and narcissism respectively; but also, high levels can be harmful, resulting in low self-worth and social withdrawal (Gilbert and Irons 2009; Sadath et al. 2024). Moral emotions thus form a social compass that guides behaviours, which children need to develop through social learning; and which in turn will have a significant effect on children's social functioning and development. For moral emotions to emerge, children need to self-evaluate their behaviours based on how others will perceive these (Leary 2004). The earliest signs in children's behaviour showing a differential understanding of shame and guilt are around the age of 2 years (Da Silva, Ketelaar, et al. 2022).

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Key Points

- Although guilt and shame have been found to impact social relationships differently in young children, the extent to which they affect peer-related aggression had not yet been studied. Since these emotions rely on input from the social environment their development might be more difficult for DHH children who often face (invisible) barriers to access their social surroundings.
- We examined these relationships in 199 hearing and 42 DHH children. Outcomes revealed no group differences; guilt was related to less peer-related aggression, whereas shame was related to more reactive aggression.
- Although guilt and shame are important for not harming social relationships and respect social ranking, both emotions can easily go up to an extent that becomes dysfunctional, leading to internalizing symptoms or prompting the individual to strike back or act out.

To develop a social compass, knowledge about unwritten, often implicit social rules is required (Saarni 1999). This kind of knowledge is acquired through social learning which can be more challenging for children who may experience difficulties accessing their social environment, as is the case for deaf and hard-of-hearing (DHH) children (Rieffe et al. 2018; Tsou et al. 2021). Even with well-fitted hearing devices, conventional hearing aids as well as cochlear implants, these techniques have limitations. To date, these aids still make it difficult to filter different simultaneous sounds. For example, a DHH child at a playground or busy classroom will have difficulties hearing a targeted person whilst ignoring or dampening other sounds, as most hearing children do automatically (Da Silva, Rieffe, et al. 2022; Li et al. 2025). Studies that examined shame and guilt in DHH and hearing participants focused mostly on children and/or adolescents, and consistently showed lower levels (i.e., lower mean scores) of both guilt and shame compared to hearing peers (Broekhof et al. 2018, 2020, 2021; Ketelaar et al. 2015; Li et al. 2024), emphasising the important role of children's access to their social environment and subsequent social learning in the development of moral emotions. Yet how these moral emotions affect interpersonal relationships seems to be different for guilt and shame.

1.1 | Guilt, Restoring the Harm

Feelings of guilt arise when harm is done to another person, and one feels responsible for this (Tracy and Robins 2004). Guilt evokes the urge (i.e., action tendency) to restore, to make up, which can take the form of an apology, or actual reparations (Frijda 1986; Tangney et al. 2007). Guilt is thus focused on the other person, or on the relationship with that person, and efforts are made to safeguard that relationship and/or the well-being of the harmed person (Dempsey 2017; Tracy and Robins 2004). In support of these theoretical assumptions, empirical studies showed how higher levels of guilt are related to more empathy, and prosocial behaviours, yet less delinquency and proactive aggression, for example, instrumental aggression to obtain certain goals (Ortiz Barón et al. 2018; Broekhof et al. 2018, 2020, 2021;

Novin and Rieffe 2015). Some of these studies showed these associations over time, thus confirming the causal role that guilt plays in preventing aggression. Note that this pattern is found in both hearing and DHH adolescents (Broekhof et al. 2021).

1.2 | Shame, Becoming a Better Person

Shame is supposed to evoke the urge to become a better person, whilst emphasising and respecting social status (Nichols 2015). This 'better person' wants to live up to the ideal of a good citizen, showing respect towards peers, parents, and teachers, thus doing what is morally right within their social ranking. Shame arises when a child transgresses or fails to meet the ruling social or moral standards and others have witnessed, or worse, (publicly) named this transgression (Izard 1977). Failures thus may result in feeling devalued, and being socially ostracised (Frijda 1993; Nichols 2015). Literature shows that feelings of shame are commonly related to low self-esteem and poor mental health in older children and adolescents (Tangney et al. 2007). Importantly, feeling ashamed implies that the focus is inward and negative about oneself. A shameful child will try to hide, disappear, or try to ignore, or dismiss what happened. Yet, this negative feeling about oneself, especially when exposed publicly, can easily turn into anger or aggression towards the person who 'exposed' the shamed person, or it can result in reactive aggression in general (Tangney et al. 2007). Previous studies confirmed that more shame was related to more externalising problems in preschool children (Da Silva, Ketelaar, et al. 2022; Li et al. 2023); more anti-social behaviours in school children (Ortiz Barón et al. 2018), and more reactive aggression in DHH and hearing adolescents (i.e., aggression in response to a perceived threat or provocation) (Broekhof et al. 2021).

1.3 | Present Study

Moral emotions like shame and guilt are important milestones in early development, as children need to learn societal norms and adapt their behaviours accordingly. However, whereas the positive impact of guilt is well-documented, shame seems to be more harmful rather than strengthening social relationships or one's position in the social (peer) group. Although studies among preschool children indeed confirmed these relationships for the moral emotions of shame and guilt with externalising problems (Li et al. 2023), this has not yet been studied in the context of peer-related aggression. Yet, studies that involved older age groups confirmed the different relationship of reactive/proactive aggression with shame and guilt in DHH and hearing adolescents (Broekhof et al. 2021).

The first aim of this study was to examine differences in levels of moral emotions (shame and guilt), externalising problems, and peer-related aggression (proactive and reactive aggression) between DHH and hearing preschool children. To this end, mean scores for these indices based on parent/caregiver reports were compared between both groups. Based on previous studies, we expected lower levels of moral emotions, but higher levels of externalising problems and aggression in the DHH group compared to their hearing peers (Broekhof et al. 2021; Ketelaar et al. 2015). For exploratory purposes, we also examined these differences

within the DHH group, namely in children with bilateral cochlear implants versus children with bilateral hearing aids.

The second aim of this study was to examine the extent to which moral emotions are related to externalising problems and both forms of aggression in the two groups. Based on previous studies, we expected that shame would be positively associated with externalising problems and reactive aggression, while guilt was expected to show a negative association with externalising problems and proactive aggression (Li et al. 2023). We expected these associations to be similar in DHH and hearing children (Broekhof et al. 2021).

2 | Methods

2.1 | Participants and Procedure

A total of 42 DHH (Mage = 65.21 months, SD = 17.08 months; 62% boys) and 199 hearing (Mage = 66.87 months, SD = 14.74 months; 51% boys) children participated (for further descriptives of this

sample, see Table 1, including the degree of hearing loss and hearing age [i.e., biological age corrected for age of implantation or fitting] for the DHH group). DHH children were recruited through doctors from two hospitals in Lisbon. Inclusion criteria were (a) hearing loss with a minimum hearing threshold of 40 dB in the better ear; (b) no additional diagnosed developmental, cognitive, or neurodevelopmental conditions, other than hearing loss (e.g., ADHD); and (c) children were attending kindergarten, preschool, or primary school.

Caregivers of eligible children attending the Otorhinolaryngology department of the hospitals were informed about the purpose of the study and asked for participation by an independent researcher. Caregivers who agreed were asked to fill out questionnaires and indicate the (pre)school that their DHH child attended. These schools were contacted, and to prevent any bias in the selection of children for the control group, caregivers of all children in classes with the DHH children were also asked to participate. Approval for this study was obtained from the Leiden University Ethical Committee, the Portuguese Committee of Data Protection and the Portuguese Directorate

TABLE 1 | Demographic characteristics of participants.

	Total study population		DHH study population		
	TH	DHH	Bilateral CI	Bilateral HA	Bimodal (CI&HA)
No. of children	199	42	22	15	5
Age					
Mean—in months (SD)	66.87 (14.74)	65.21 (17.08)	70.47 (19.40)	60 (12.02)	65.40 (22.31)
Range—in months (SD)	37–107	37–107	37–92	41–107	40–98
Gender					
Male (%)	102 (51.3%)	26 (61.9%)	13 (59.1%)	10 (66.7%)	3 (60%)
Language indices					
Emotion vocabulary* (range 0–1)	0.70 (0.17)	0.57 (0.24)	0.57 (0.25)	0.55 (0.24)	0.60 (0.20)
Preschoolers— <i>n</i>	35	30	17	9	4
Comprehension* (range 0–1)	0.96 (0.07)	0.88 (0.11)	0.88 (0.12)	0.89 (0.07)	0.88 (0.18)
Production* (range 0–1)	0.98 (0.07)	0.73 (0.32)	0.73 (0.36)	0.71 (0.31)	0.79 (0.23)
Pragmatics* (range 0–1)	0.56 (0.31)	0.17 (0.29)	0.21 (0.32)	0.09 (0.17)	0.21 (0.42)
Elementary— <i>n</i>	31	11	4	6	1
Total*	1.65 (0.21)	1.13 (0.61)	0.87 (0.61)	1.19 (0.62)	1.76
Degree of hearing loss					
Moderate—40–60 dB (%)		6 (14.3%)		6 (40%)	
Severe—61–90 dB (%)		9 (21.4%)		9 (60%)	
Profound—> 90 dB (%)		24 (57.1%)	22 (100%)		2 (40%)
Severe and profound (%)		3 (7.1%)			3 (60%)
Hearing age*	66.87 (14.74)	43.48 (17.25)	43.46 (10.10)	42.13 (22.85)	47.60 (25.64)

**p* < 0.05 (after Bonferroni correction).

of Education. This study is part of a larger study on social and emotional functioning in DHH and hearing preschool children (Da Silva, Rieffe, et al. 2022; Da Silva et al. 2023).

2.2 | Measures

The Moral Emotions Questionnaire (MEQ; Da Silva, Ketelaar, et al. 2022) asks caregivers to report on their child's behavioural responses associated with shame (4 items; e.g., 'My child hides when s/he has done something wrong') and guilt (6 items; e.g., 'My child shows that s/he regrets something'). Items were rated on a 3-point scale (0 = never, 1 = sometimes and 2 = often). Total mean scores were computed per scale. Higher total mean scores indicate higher levels of shame and guilt. For the translation of the MEQ into Portuguese, we followed the procedure introduced by Brislin (1986).

The Portuguese Strength and Difficulties Questionnaire (SDQ; Fleitlich et al. 2005; (Goodman 1997)) was filled out by caregivers. For the purpose of this study, the Behavioural Problems and Hyperactivity scales were combined to provide an Externalising Problems scale (SDQ (Goodman 1997)). Caregivers rated their child's behaviours (10 items; e.g., 'Restless, overactive, cannot stay still for long') on a 3-point scale. (0 = not true, 1 = somewhat true, 2 = certainly true). A higher total mean score indicates more externalising problems. The internal consistency was good (Table 2; $\omega = 0.73$).

Reactive and proactive peer aggression were obtained using the Aggressive Behaviour Rating (Da Silva et al. 2023; Dodge and Coie 1987). Caregivers rated six items regarding reactive aggressive behaviours (e.g., 'When teased, strikes back', three items) and proactive aggressive behaviours (e.g., 'Threatens or hits other children', three items), on a 5-point scale (0 = (almost) never to 4 = (almost) always). Total mean scores were computed per scale. Higher total mean scores indicate higher levels of aggression. For both scales, the internal consistency was good (Table 2; $\omega = 0.73$, $\omega = 0.73$).

2.3 | Language Indices

Emotion Vocabulary was measured through a 20 items caregiver report (Ketelaar et al. 2015; Veiga et al. 2023). Caregivers rated whether their children knew and used each of 20 emotion and/or mental state words (0 = no, 1 = yes). A higher total mean score indicates better emotion vocabulary in children.

Language skills (comprehension, production and pragmatics) were assessed using the TALC tasks (Sua-Kay and Tavares 2007). Language comprehension was measured through object- and image-identification tasks, in which children pointed to named objects, actions or semantic relations; scores reflected the averaged proportion of correct responses (0–1), with higher scores indicating better comprehension. Language production was assessed by asking children to name objects, actions or characteristics depicted in the same materials, with scores based on the average accuracy across items (0–1). Pragmatic language was evaluated using scenario-based questions derived from a classroom scene, in which children were asked to provide

TABLE 2 | Psychometric properties for shame, guilt, externalising problems and peer aggression.

	No. items	Range	McDonald's omega	Cronbach's alpha	Mean inter-item correlation	Mean (SD)			
						Hearing (n = 199)	DHH (n = 42)	DHH Subgroups	
								HA bilateral (n = 15)	CI bilateral (n = 22)
Shame (MEQ)	4	0–2	0.66	0.66	0.33	0.64 (0.41)	0.72 (0.44)	0.83 (0.36)	0.69 (0.48)
Guilt (MEQ)	5	0–2	0.60	0.61	0.28	1.36 (0.35)	1.36 (0.41)	1.40 (0.45)	1.35 (0.43)
Externalising problems (SDQ)	10	0–2	0.73	0.71	0.20	0.66 (0.32)*	0.77 (0.35)*	0.81 (0.36)	0.72 (0.39)
Reactive aggression (ABR)	3	0–4	0.73	0.70	0.44	1.39 (0.75)	1.37 (0.86)	1.49 (0.91)	1.36 (0.84)
Proactive aggression (ABR)	3	0–4	0.73	0.67	0.40	0.38 (0.53)	0.36 (0.42)	0.53 (0.51)	0.29 (0.35)

Abbreviations: ABR, aggressive behaviour rating; MEQ, moral emotions questionnaire; SDQ, strengths and difficulties questionnaire.

* $p < 0.05$ (after Bonferroni correction).

appropriate verbal responses to everyday social situations. For all domains, scores were averaged across items, with higher scores indicating stronger language abilities.

Descriptives and internal consistencies are presented in Table 2, and for the language indices in Table 1.

2.4 | Statistical Analyses

The current study was registered prior to data analyses. This registration can be assessed through OSF. To assess construct validity of the Portuguese shame and guilt scales, we performed a CFA where the originally proposed model (Da Silva, Ketelaar, et al. 2022) was tested. Since the data was not normally distributed and was categorical in nature, we used the weighted least-squares means and variance adjusted (WLSMV) estimation (Brown 2006). Items were considered appropriate within their designated scale if their factor loading was higher than 0.300. The model was considered as appropriate if the χ^2/df was lower than 3 (Bollen 1989); the root mean square error of approximation (RMSEA) was equal or lower than 0.060 (Hu and Bentler 1999); the comparative fit index (CFI) was higher than 0.900 (Bollen 1989); and the standardised root mean square residual (SRMR) was lower than 0.080 (Little 2013). The CFA was conducted using R's (version 4.4.1) Lavaan package (version 0.6–18; Rosseel (2012)).

The CFA with the originally proposed items for the Moral Emotions Questionnaire Indicated a poor fit ($\chi^2/\text{df}=2.183$; RMSEA=0.072; CFI=0.687; SRMR=0.100). To improve the model we sequentially deleted items with a factor loading that did not exceed 0.300. Following this step-wise method, items 16, 23, 20, 18, 12, 10 were deleted in this specific order, resulting in Model 2 (Table 3). Model 2, showed a robust goodness of fit, since all the fit indices reached their desired cut-off values ($\chi^2/\text{df}=1.838$; RMSEA=0.063; CFI=0.903; SRMR=0.076). Shame and guilt scales showed acceptable internal consistencies after item deletion (Table 2; $\omega=0.66$, $\omega=0.62$).

McDonald's omega and inter-item correlations were used to assess internal consistencies. Few missing values occurred. Little's MCAR test showed missing values (<2.2%; 13 cases) were missing at random ($p>0.05$). Listwise deletion was used for the cases with missing values (1 DHH/12 hearing).

t-tests were conducted to test for group differences between DHH and hearing, and within the DHH group (bilateral CI vs. bilateral HA). Pearson's correlations were conducted to examine the relationships of both moral emotions with externalising problems and both forms of aggression. Significant correlations were found for age $\times$ guilt ($r=0.232$; $p<0.001$), thus age was controlled for in all correlations. Fisher *r*-to-*Z* transformations were used to examine the strength of the correlations per group. To correct for multiple testing, the Bonferroni procedure was applied, and the significance level of the main analyses was adjusted.

3 | Results

Independent sample *t*-tests (Table 2) showed no differences between hearing and DHH children. Also, exploratory *t*-test

TABLE 3 | Shame and guilt items and CFA factor loadings.

	Shame	Guilt
1—My child hides when they have done something wrong	0.79	
4—My child does not look at me when they have done something wrong	0.41	
9—My child quickly walks away when they have done something that is not allowed	0.52	
17—When my child has broken something, they try to hide it from me	0.55	
3—When my child does something that is not allowed, they to make up for it (e.g., saying sorry)		0.30
6—My child shows when they regret something		0.40
13—When my child breaks something of someone else, they try to repair it		0.65
21—When my child does something wrong (e.g., spill something), they try to fix it (e.g., fetches a cloth)		0.46
24—When my child breaks something of someone else, they want to make up for it		0.64

analyses within the DHH group revealed no differences between the bilateral CI and bilateral HA users (Table 2).

Partial correlations, controlled for age, showed positive associations for shame with externalising problems ($r=0.138$, $p=0.033$) and both types of aggression (proactive: $r=0.152$, $p=0.018$; reactive: $r=0.260$, $p<0.001$). However, after Bonferroni correction (0.008) shame was only associated with reactive aggression.

Regarding guilt, negative associations were found for externalising problems ($r=-0.348$, $p<0.001$) and both types of aggression (proactive: $r=-0.225$, $p<0.001$; reactive: $r=-0.223$, $p<0.001$). These outcomes remained also after Bonferroni correction.

After Fisher *r*-to-*Z* transformations were applied, no group differences between the strengths of the correlations appeared.

4 | Discussion

Moral emotions guide interpersonal human actions towards socially acceptable or 'correct' behaviours, respecting societal rules and hierarchies. This study confirmed that young children already have some understanding of these often implicit societal rules, as even at this young age, caregivers are able to distinguish between shame and guilt behaviours in their children. The outcomes of this study further confirmed the positive function of guilt on social relationships with both adults (fewer externalising problems) and peers (lower levels of peer related aggression, both reactive and proactive), although we

had expected proactive aggression to uniquely relate to guilt (Broekhof et al. 2021). Shame, however, seemed uniquely related to more reactive aggression (after corrected for multiple testing), which further confirms the assumed underlying anger as a reaction to being exposed and publicly devaluated (Broekhof et al. 2021).

Importantly, this study showed no differences between DHH and hearing children, contradicting previous findings which showed lower levels of moral emotions in DHH children (Broekhof et al. 2021). One possible explanation is that most children in our study received auditory intervention at an earlier age than the DHH children in previous studies on moral emotions (Broekhof et al. 2021; Ketelaar et al. 2015). In addition, all DHH children in our sample had bilateral hearing devices, whereas these previous studies involved at least 50% unilateral cochlear implants for children with bilateral severe-to-profound hearing loss, which was then a more common practice in some countries (Ketelaar et al. 2015; Netten et al. 2018).

Within the DHH group, no differences were found between children using bilateral cochlear implants and children using bilateral hearing aids. Although sample sizes precluded more fine-grained analyses, this finding further supports the notion that access to bilateral auditory input, rather than the specific technological configuration, may be a key factor to support participation in peer interactions and informal social learning contexts.

Bilateral hearing aids for children with bilateral hearing loss give children an advantage over children with unilateral aids, as sound can be detected now from more angles, but also the direction of the sound can be located. This makes it easier to locate the speaker and will give better opportunities to react and thus effectively participate in the peer group. In sum these outcomes may emphasise the importance of auditory access for informal learning situations, as children can thus better benefit from social learning within the peer group like their hearing peers. These assumptions about the positive impact of early and bilateral implantation seem also supported by other studies, but could be further examined (Lee and Sim 2020).

5 | Limitations and Future Directions

The current study contained certain limitations which may give directions to future studies. First, the design of this study was cross-sectional, which prohibits drawing conclusions regarding causality. Longitudinal studies could further explore the developmental patterns and differential functions of shame and guilt, and their subsequent contribution to the development of different forms of aggression and/or behavioural problems, such as oppositional behaviours or conduct problems in DHH children in particular. Shame and guilt are moral emotions aimed at keeping members of a society valuing and adhering to certain rules, norms and values. It is therefore important to examine the extent to which their development in DHH children keeps pace with that of their hearing peers when they grow older. This question is particularly relevant because—despite the use of bilateral hearing aids or cochlear implants—DHH children continue to face numerous and diverse societal and environmental barriers

in school settings and other everyday contexts, many of which are often overlooked (Libbi et al. 2026). These barriers are often subtle or invisible (e.g., poor acoustics in the school cantina), yet they can have a serious impact on daily social participation and, consequently, on DHH children's sense of social belonging and social learning. Future longitudinal studies could thus not only examine the cross-sectional outcomes that appeared in this study over time, but also include other factors related to these social and environmental barriers to better understand the developmental trajectory in DHH children.

Second, children's emotional functioning in this study was assessed through parent reports, possibly causing single-informant bias. Therefore, future studies may use a multi-method and multi-informant design to have a broader view on children's development. Including teachers' and peers' reports, peer connectedness and other playground observations may provide valuable insights into the specific contexts in which peer aggression occurs.

Third, the current study did not fully examine individual differences within the clinical population. For example, the age of hearing loss detection and the differences between children using unilateral versus bilateral hearing aids, cochlear implants, or a combination of both could be further explored in future studies. However, it should be noted that all DHH children in our study had bilateral fittings. Assumptions regarding the positive effect of bilateral hearing aids and/or cochlear implants should also be further examined and confirmed. As mentioned above, even bilateral fitting does not give DHH children the same (auditory) experiences as their hearing peers (Libbi et al. 2026). In addition, some children are unilaterally DHH, but those children were not represented in this study. The outcomes may thus not accurately reflect the heterogeneity of the DHH population, which is important in future studies to provide more exact information on how hearing related factors exactly contribute to morality.

6 | Conclusions and Practical Implications

The present study specifically examined moral emotions and their behavioural correlates in deaf and hard-of-hearing (DHH) preschool children in comparison with hearing peers. Contrary to our expectations, DHH children did not differ from hearing children in levels of shame, guilt, externalising problems, or peer-related aggression. These findings suggest that, at least in early childhood, DHH children can show moral-emotional functioning comparable to that of their hearing peers.

Beyond group comparisons, a key finding of the present study was the differential functions of shame and guilt, which were already observed in early childhood. Consistent with theoretical accounts, shame, although often conceptualised as a moral emotion that promotes sensitivity to social norms and hierarchy, appears to be particularly vulnerable to becoming maladaptive when experienced intensely. Under such circumstances, shame may evoke feelings of humiliation and anger, which can in turn trigger reactive aggressive responses. This interpretation is supported by our finding that higher levels of shame were uniquely associated with reactive aggression.

Guilt, on the other hand, is typically described as an other-focused emotion, oriented towards concern for the consequences of one's behaviour on others. In line with this view, guilt in the present study was associated with fewer externalising problems and lower levels of peer-related aggression, suggesting a protective function for social relationships. At the same time, it is important to acknowledge that excessive guilt may also become maladaptive, for example by increasing vulnerability to internalising symptoms such as depression (Ghatavi et al. 2002). Nevertheless, also for shame, although harmful in the moment and shortly (Broekhof et al. 2020), in the long term both emotions are expected to increase awareness regarding social rules and ranking, enhancing a society that can function without physical aggression (Frijda 1993; Nichols 2015).

Taken together, these findings highlight the clinical relevance of understanding not only the presence of moral emotions, but also their intensity and the contexts in which they are elicited and communicated. For instance, public exposure of shameful behaviour may be particularly damaging and provoke aggression, whereas more subtle or implicit forms of moral feedback may still convey social norms while preserving a child's sense of self-worth.

Author Contributions

Guida Veiga: conceptualization, investigation, writing – original draft, writing – review and editing, methodology, formal analysis, supervision, project administration. **Herédio Sousa:** resources, project administration, investigation. **Johan H. M. Frijns:** writing – review and editing, supervision, resources. **Lúisa Monteiro:** resources, project administration, investigation. **Carolien Rieffe:** conceptualization, investigation, writing – original draft, methodology, validation, writing – review and editing, formal analysis, supervision, project administration, funding acquisition. **Brenda M. S. Da Silva:** funding acquisition, methodology, writing – review and editing, formal analysis, data curation.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The dataset and associated information used in the current study are shared publicly on the DANS archiving platform “DataverseNL” (<https://dataverse.nl/>) via this link <https://doi.org/10.34894/2A9WYV>.

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