



# Beyond behavior: the penitence congruity effect among children

Mariola Paruzel-Czachura<sup>1,2</sup> · Artur Domurat<sup>1</sup>

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## Abstract

The penitence congruity effect observed in adults suggests that people may assess wrongdoers more leniently when they exhibit guilt and deontological beliefs. It means that judgments about one's morality are influenced not only by their actions but also by their expressed moral emotions and beliefs. To determine whether children also exhibit this effect, we studied  $N=250$  children aged 10 and 11. We presented them with six vignettes: four depicting morally questionable actions (cheating on an exam, lying about homework, fighting with another student, stealing money found in a school hallway) and two displaying socially undesirable behaviors (attending school in pajamas, being late to school). Children also received information about the wrongdoer's emotions (presence or absence of guilt) and beliefs (deontological stance or its absence) or were provided with no additional information on emotions or beliefs. Participants were then asked to assess a wrongdoer's morality for each story. Our findings not only confirm the presence of the penitence congruity effect in children but also demonstrate its applicability to non-conventional behaviors. Specifically, when a wrongdoer expresses guilt and acknowledges wrongdoing, children are more lenient in their evaluations than in the control condition when no insights into the wrongdoer's emotions or beliefs are provided. The results align with the person-centered theory, which posits that individuals assess overall character rather than isolated actions, considering all available information about the person in question. The findings hold potential applications, e.g., in moral education.

**Keywords** Penitence congruity effect · Moral judgments · Deontology · Guilt · Person-centered theory

One of the main goals of moral psychology is to understand how people make moral judgments (Malle, 2021), particularly toward others (Ellemers et al., 2019). The need to be perceived as moral is a paramount psychological imperative (Prentice et al., 2019). This perspective is not unidirectional: individuals also value morality in others (Brambilla et al., 2021; Goodwin et al., 2014). This moral consciousness is not exclusive to adults (Aquino & Kay, 2018). Early in life, children also manifest signs of moral discernment (Bloom, 2013; Hamlin et al., 2007; Killen & Smetana, 2023). For instance, children can readily identify fairness breaches such as theft and manifest disapproval through prolonged

focus or verbal expressions (McAuliffe et al., 2017; Shaw et al., 2014).

However, what criteria underlie our moral judgments? Predominantly, it is the observed behaviors of others. This principle is consistently evidenced on a daily basis across innumerable contexts, e.g., judges evaluate defendants' actions, clergy members reflect on their followers' transgressions, and educators assess students' behavior. Typically, morally upright actions result in positive evaluations, while transgressions lead to negative evaluations (Uhlmann et al., 2015). These judgments often target wrongdoers, i.e., those individuals who commit infractions in the light of some cultural norms (see more on moral judgments: Malle, 2021). While cultural interpretations may vary, a widely accepted understanding of morality involves "obligatory concerns with others' welfare, rights, fairness, and justice, as well as the reasoning, judgment, emotions, and actions that spring from those concerns" (Dahl, 2023, p. 12). To this insight, the wrongdoer is someone who compromises these values.

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✉ Mariola Paruzel-Czachura  
mariola.paruzel-czachura@us.edu.pl

<sup>1</sup> Institute of Psychology, University of Silesia in Katowice, Katowice, Poland

<sup>2</sup> Penn Center for Neuroaesthetics, ChatLab, University of Pennsylvania, Philadelphia, USA

In the present study, drawing from the person-centered theory (Uhlmann et al., 2015), we postulated that more than just actions might shape the moral evaluations of wrongdoers. Specifically, we focused on wrongdoers' expressions of guilt and their deontological beliefs, i.e., acknowledging the inherent incorrectness of their actions (Kant, 1916). Previous works in moral psychology have recognized the potential influence of wrongdoers' beliefs and emotions on their moral appraisal. However, prior studies have typically addressed emotions and beliefs without considering them simultaneously (see the review: Paruzel-Czachura & Białek, 2022). More recent insights suggest a nuanced perspective: when both guilt and deontological beliefs are concurrently expressed, even grave offenses like murder may receive somewhat neutral evaluations (Paruzel-Czachura & Białek, 2022). This phenomenon termed the “penitence congruity effect,” posits that aside from actions, the wrongdoers' emotional and cognitive responses play roles in moral evaluations. We aimed to investigate if this effect replicates in children, specifically those aged 10 and 11, and if they also incorporate a wrongdoer's expressions of guilt and inherent moral beliefs when assessing their moral standing. Furthermore, we tried to determine the applicability of the penitence congruity effect to non-conventional behaviors, thereby broadening its scope from prior studies on adults.

## Factors influencing judgments about wrongdoers

Previous research has demonstrated that when evaluating moral character, the foremost consideration is the behavior demonstrated by the individual in question. This behavioral lens applies both to adults' judgments (Baron & Hershey, 1988; Paruzel-Czachura, 2016; Velasquez & Rostankowski, 1985; Vidmar, 2011) and to children's judgments, even extending to reactions of infants (e.g., Bloom, 2013; Hamlin, 2013; Killen & Smetana, 2023; Piaget & Inhelder, 1972; Starmans & Bloom, 2016). However, behavioral actions are just one piece of a multifaceted puzzle. For instance, the consequences of actions often weigh heavily in these judgments. In the widely discussed study by Cushman (2008), adults were asked to evaluate the wrongness and blame in various scenarios, like comparing two intoxicated drivers – one who crashed into a tree versus another who tragically struck a child. Predictably, due to the graver outcome, the latter obtained sterner judgment. Other factors that were relevant in adult assessments were the predictability of the wrongdoer's action (Walker et al., 2021) and societal gender perceptions, where, for example, women's immoral actions were judged less severely than men's immoral actions due to stereotypes (Nunner-Winkler et al., 2007; Williams & Best,

1990). These multifactorial considerations resonate with the person-centered theory, suggesting that people weigh multiple factors when judging someone's moral character (Uhlmann et al., 2015).

Children, like adults, form moral judgments based on more than just observed behaviors. As they grow up, they begin to integrate contextual nuances, such as recognizing a wrongdoer's intentions (D'Esterre et al., 2019; Hamlin, 2013; Kalish, 1998; Koenig et al., 2019; Nobes et al., 2009; Riggs & Kalish, 2016) or the consequences of an action (Pizarro et al., 2003; Riggs & Kalish, 2016). They also become more discerning of the involved parties, judging their peers and parents differently (Mammen et al., 2021) or even modulating their judgments based on the reputation of the agent, as seen in evaluations of immoral actions towards perceived bullies as more acceptable (Smetana & Ball, 2021). Our study focuses on the wrongdoer's emotions and beliefs as factors influencing such judgments.

## The interplay of wrongdoers' moral emotions and beliefs

Prior studies investigated how wrongdoers' emotions and beliefs impacted adults' moral evaluations. Concerning emotions, the “heart” line of research has centered on how adults appraise the morality of wrongdoers when they exhibit socially desirable emotions like guilt after committing their misdeeds (Cohen et al., 2012; Darby & Schlenker, 1989; Ohbuchi & Sato, 1994; Robinson et al., 2012; Smith & Harris, 2012; Weiner et al., 1991). Recognized as a poignant moral emotion (Prinz & Nichols, 2010), guilt has also been observed to guide children's judgments. For example, children as young as five were found to judge wrongdoers more leniently when the wrongdoer expressed guilt (Kochanska et al., 2002; Vaish et al., 2011).

Regarding beliefs, the “mind” line of research has explored how a wrongdoer's cognitive processes, encompassing their values and ethical beliefs, impact moral judgments (Levine et al., 2018; Tomlinson et al., 2014). For instance, if a wrongdoer adheres to widely accepted deontological beliefs (echoing Kant, 1916), such as opposing theft under any circumstance, adults generally regard them as possessing higher moral standards than consequentialists, who might deem theft permissible under specific conditions (Everett et al., 2016, 2018; Walker et al., 2021). However, studies of the impact of deontological beliefs on children's moral judgments are relatively rare.

In sum, many studies have approached wrongdoers' emotions and beliefs as separate entities (Paruzel-Czachura, 2016; Paruzel-Czachura & Dobrowolska, 2018). However, recent insights from Paruzel-Czachura and Białek (2022)

suggest that individuals' emotions and cognitions operate concurrently, proposing that prior research might not capture the full spectrum of how emotions and beliefs shape moral evaluations. While it is apparent that an individual's actions are central in moral judgments, the significance of joint wrongdoer's beliefs ("mind") and emotions ("heart") should be investigated.

## The penitence congruity effect

In a series of five experiments involving  $N=1558$  participants, Paruzel-Czachura and Białek (2022) studied to which extent the perception of wrongdoers' morality depends on wrongdoers' cognitive and emotional penitence on the example of deontological beliefs and guilt. The studies demonstrated that both types of penitence similarly enhanced the perception of the wrongdoer's morality. This culminated in a "penitence congruity effect," where the combined display of cognitive and emotional penitence amplified the perceived morality of the wrongdoer. This effect was prominent when participants compared several wrongdoers, including murderers of their parents or murderers of many people (Studies 1, 2, and 5), but was absent when participants judged them independently (Studies 3 and 4). Furthermore, Study 5 demonstrated that the congruence of remorseful signals mattered: inconsistent signals (e.g., wrongdoer felt guilt but thought a murder could be justified) diminished the credibility of expressing guilt, subsequently altering moral perceptions.

Nonetheless, the influence of knowledge about a wrongdoer's guilt and deontological beliefs on children's moral judgments remains largely uncharted. Our study aimed to bridge this gap by investigating how both co-occurring emotions and beliefs of a wrongdoer shape children's moral impressions. Unlike earlier studies that focused solely on the influence of wrongdoers' emotions on moral evaluations or the influence of wrongdoers' beliefs on moral evaluations, our study considers the interplay between emotions and beliefs. Considering the simultaneous expression of these factors, we aim to offer a richer understanding of how children discern the morality of wrongdoers.

## The current research

Given that children can discern differences between beliefs and emotions (Cushman et al., 2013; Darley & Shultz, 1990; Richardson et al., 2012), our study seeks to explore the penitence congruity effect among school-aged children. We aimed to investigate if the combined influence of a wrongdoer's guilt and deontological beliefs might provide

lenient judgments of wrongdoers' morality. We focused on 10- and 11-year-old children because research indicates that children in this age exhibit an understanding of differing beliefs and emotions in others, as demonstrated by their performance on the tasks measuring their theory of mind (D'Esterre et al., 2019; Hughes & Devine, 2015; Sodian et al., 2016, 2020). According to the theory of mind (Killen & Smetana, 2023), children at this age, compared to younger children, can more adeptly comprehend the variability in beliefs between an evaluator and the evaluated.

We first hypothesize that a wrongdoer's expression of socially desirable deontological beliefs, e.g., "Stealing is wrong," would positively influence children's moral assessments of the wrongdoer's morality (Hypothesis 1). Conversely, the absence of these beliefs would negatively influence the evaluations. Similarly, our second hypothesis posits that a wrongdoer's expression of socially desirable emotions like guilt would also enhance the children's positive moral evaluations, confirming the converse for the absence of such emotions (Hypothesis 2).

Next, we tested if the penitence congruity effect would appear for unconventional behaviors, extending previous research on this effect among adults (Paruzel-Czachura & Białek, 2022). Our third hypothesis is that (Hypothesis 3) the penitence congruity effect would be observed across both categories of transgressions. Moral rules are distinct from societal customs and conventions, and children are adept at differentiating the two (Nucci, 1981; Smetana, 1981). For example, actions against moral norms often result in direct harm (e.g., physical harm, theft), whereas contravening societal conventions might not entail any harm (e.g., wearing sleepwear to school). Research has shown that children perceive moral transgressions as graver than conventional ones (Josephs et al., 2016; Nucci, 1981) and believe moral wrongdoings warrant stricter punishment (Howard et al., 2015; Smetana, 1985). Accordingly, we hypothesized that children would perceive moral violations as more immoral than violations of conventions (Hypothesis 4).

In summary, this study augments existing literature by examining the simultaneous expression of a wrongdoer's emotions and beliefs and focusing on children's moral discernments. We try to replicate the penitence congruity effect found among adults and expand the scope of the penitence congruity effect to encompass both moral and conventional transgressions.

## Method

The ethical committee of the University of Silesia in Katowice approved the study. The data, analysis codes, and study materials are available at <https://osf.io/dyzm5/>.

## Power analysis

We used G\*Power to calculate the sample size for F tests in a between-subjects ANOVA with fixed effects across five conditions: feeling guilt and deontological beliefs, feeling guilt and no deontological beliefs, no guilt and deontological beliefs, no guilt and no deontological beliefs, control condition (no information about guilt and beliefs). To detect a moderate effect size of  $f=0.25$ , with an alpha set at 0.05 and a power set at 0.8, we determined that a total sample size of 200 was required. We considered this an approximate target, acknowledging that some classrooms might have more children than expected. We decided not to exclude any participants based on classroom size.

## Participants

The final sample consisted of  $N=250$  children ( $n=135$  girls). Based on the local grading system, these children were in the fifth grade, 93 at age 10 and 157 at age 11.

## Procedure

Children were recruited from two local elementary schools in Poland in 2020. All children volunteered to participate in the study, and their parents provided additional consent in accordance with the ethical guidelines of the Ethical Committee of University of Silesia in Katowice. We visited the local schools and invited all children to participate in the study during their class hours. The participants completed the survey on paper in their classrooms. The surveys were randomized. Each participant read stories of the same category (e.g., all stories described wrongdoers feeling guilty and expressing deontological beliefs). The study lasted approximately 10 min, and the children responded in their native language.

## Materials and measures

We designed four vignettes depicting unethical behaviors: cheating on an exam, lying to a teacher about homework, fighting with another student at school, and stealing money found in a school hallway. Responses across these stories were averaged to generate a *Morality* variable. Two stories centered on conventional behaviors: wearing pajamas to school and arriving late for school. Responses across these stories were averaged to yield a *Conformity* variable. An illustrative story on breaching moral norms (*Morality*) reads: “A student had a test on what he had learned during a previous session. He did not prepare for the test and stole the answers from a colleague. The student feels guilty about

it, and he believes that students should not cheat on tests as it is wrong”. A story highlighting the breaching of conventional norms (*Conformity*) is: “A student came to school yesterday in green, striped pajamas, which drew everyone’s attention. The student feels guilty about this, although he believes one can come to school in pajamas”.

For each vignette, the evaluation question was as follows: “To what extent do you think the main character in the story – the student – is a moral person? How many stars do you give that person, from one star (*very immoral/bad*) to eight stars (*very moral/good*)”. We manipulated two types of information about a wrongdoer: their emotions (“I feel guilty”/“I do not feel guilty”/no information), their beliefs (“We should not steal, it is bad”/“We can steal, it is okay”/no information).

## Data analysis strategy

Data were analyzed using a mixed ANOVA model with participants’ evaluative responses as the dependent variable (two types: *Conformity* and *Morality*; within-subject factor) and emotions (no guilt vs. guilt) and beliefs (deontological vs. non-deontological) as between-subjects factors. Significant tests for the two between-subjects factors, emotions and beliefs, would be evidence for Hypothesis 1 and Hypothesis 2. A significant interaction between these factors would support Hypothesis 3, postulating the emergence of the penitence congruity effect. If the within-subjects factor were significant, it would support Hypothesis 4.

However, this general pattern for evaluative responses might differ if *Conformity* and *Morality* evaluations were analyzed separately. Therefore, to obtain a more detailed view, we conducted two 2-way ANOVAs, one with *Conformity* as a dependent variable and another with *Morality*.

Finally, we explored how the information on the wrongdoer’s emotions or beliefs might contribute to a baseline where no information is provided. We analyzed contrasts between average *Morality* and *Conformity* responses in the four conditions (feeling guilt and deontological beliefs, feeling guilt and no deontological beliefs, no guilt and deontological beliefs, no guilt and no deontological beliefs) and the responses in the control condition (no information about guilt and beliefs).

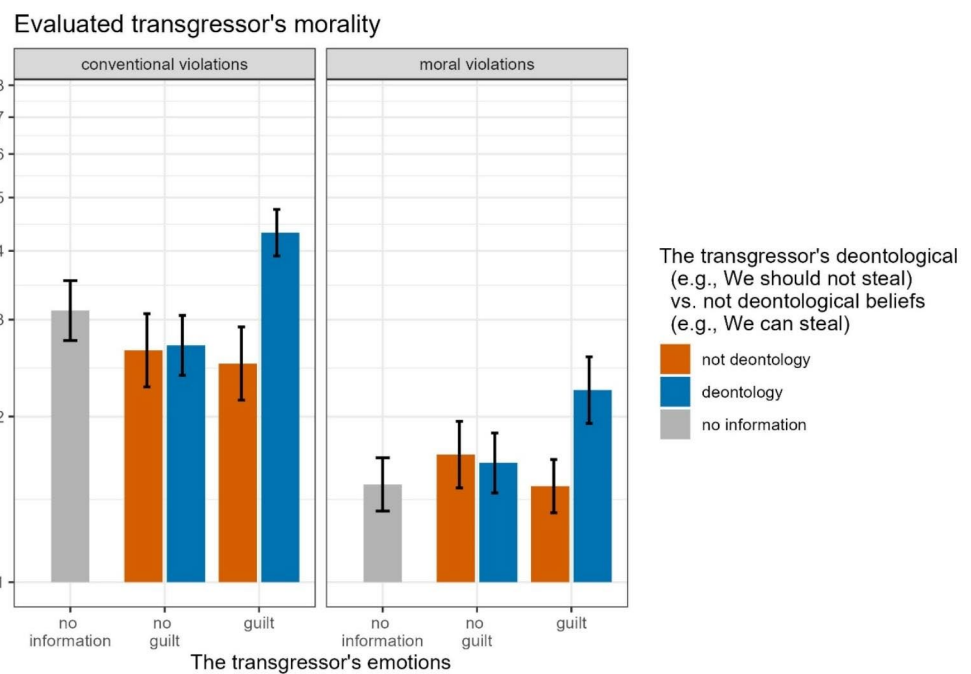
## Results

We intended to analyze *Conformity* (Cronbach’s  $\alpha=0.538$ ) and *Morality* ( $\alpha=0.772$ ) as averaged evaluations. However, most answers were slanted towards the left-hand side of the response scale. The total means were significantly lower than the mid-point of the scale (4.5): for *Conformity*,

**Table 1** Descriptive Statistics for Morality and Conformity Indices and Their Antilogs

Descriptive Statistics	Condition				
	No Information	No Guilt & Non-deontology	No Guilt & Deontology	Guilt & Non-deontology	Guilt & Deontology
<b>Morality</b>					
<i>M</i> ( <i>SD</i> )	1.81 (0.82)	2.18 (1.37)	2.02 (1.15)	1.77 (0.93)	2.72 (1.36)
<b>Log<sub>2</sub>Morality</b>					
<i>M</i> ( <i>SD</i> )	0.59 (0.54)	0.77 (0.72)	0.72 (0.65)	0.58 (0.58)	1.16 (0.69)
95% <i>CI</i>	[0.43, 0.75]	[0.57, 0.97]	[0.54, 0.90]	[0.42, 0.74]	[0.96, 1.36]
<i>antilog</i> ( <i>M</i> )	1.51	1.71	1.65	1.49	2.23
<i>antilog</i> (95% <i>CI</i> )	[1.35, 1.68]	[1.48, 1.96]	[1.45, 1.87]	[1.34, 1.67]	[1.94, 2.57]
<b>Conformity</b>					
<i>M</i> ( <i>SD</i> )	3.62 (1.31)	3.17 (1.48)	3.07 (1.20)	2.92 (1.39)	4.69 (1.40)
<b>Log<sub>2</sub>Conformity</b>					
<i>M</i> ( <i>SD</i> )	1.64 (0.67)	1.40 (0.80)	1.43 (0.61)	1.32 (0.75)	2.11 (0.48)
95% <i>CI</i>	[1.46, 1.82]	[1.18, 1.62]	[1.25, 1.61]	[1.10, 1.54]	[1.97, 2.25]
<i>antilog</i> ( <i>M</i> )	3.12	2.64	2.69	2.50	4.32
<i>antilog</i> (95% <i>CI</i> )	[2.75, 3.53]	[2.26, 3.08]	[2.38, 3.05]	[2.14, 2.91]	[3.92, 4.76]

**Fig. 1** Children’s evaluation of Wrongdoers’ morality as a function of Wrongdoer’s guilt and deontological beliefs. Note: Error bars show antilogs for group means and 95% confidence intervals computed



$M=3.49, SD=1.50, t(249) = -10.64, p < .001$ , Cohen’s  $d = -0.673$ ; for Morality,  $M=2.10, SD=1.19, t(249) = -31.89, p < .001$ , Cohen’s  $d = -2.017$  – see Table 1. This tilt towards the left-hand side of the response scale and relatively low group means (ranging from 2.96 to 4.69 for Conformity and 1.81 to 2.72 for Morality) suggests that participants evaluated wrongdoers as immoral (see the descriptive statistics in Table 1). The empirical distributions of both Morality and Conformity were right-skewed within groups. Therefore, we performed base 2 logarithm transformations on the response data for the conformity and morality stories. We averaged the resultant values to form new scales entitled

$Log_2Conformity$  ( $\alpha=0.593$ ) and  $Log_2Morality$  ( $\alpha=0.760$ ). Descriptive statistics are shown in Table 1. We computed antilogs for the group means and confidence intervals of  $Log_2Morality$  and  $Log_2Conformity$ , referencing the original rating scales (see Table 1; Fig. 1).

To verify the hypotheses, participants’ evaluative responses were analyzed using a mixed model ANOVA: 2 (type of evaluation:  $Log_2Conformity$  vs.  $Log_2Morality$ , within-subjects) x 2 (emotions: no guilt vs. guilt, between-subjects) x 2 (beliefs: deontological vs. non-deontological, between-subjects). There were significant main effects for beliefs,  $F(1, 196)=17.54, p < .001, \eta^2_p=0.082$ , and



emotions,  $F(1, 196)=7.10, p=.008, \eta^2_p=0.035$ , supporting Hypotheses 1 and 2, given the directions of the differences in the means in Table 1; Fig. 1. The interaction between emotions and beliefs also proved significant,  $F(1, 196)=19.16, p<.001, \eta^2_p=0.089$ , supporting Hypothesis 3. As Fig. 1 shows, the significant main effect for beliefs and the significant between-subject interaction result from evaluations by the guilt/deontological group, supporting the concept of penitence congruity. Interactions involving the within-subjects (evaluation type) factor were not significant,  $p>.085$ . Conventional violations ( $M=1.56, SD=0.74$ ) were judged significantly less immoral than moral violations ( $M=0.81, SD=0.69$ ),  $F(1, 196)=221.98, p<.001, \eta^2_p=0.531$ , hence supporting hypothesis 4 that children would judge transgressors of moral norms as less moral than transgressors of conventional norms.

The first ANOVA, for  $\text{Log}_2\text{Conformity}$ , revealed significant main effects of both emotions,  $F(1, 196)=9.99, p=.002, \eta^2_p=0.048$ , and beliefs,  $F(1, 196)=18.44, p<.001, \eta^2_p=0.086$ , and their significant interaction,  $F(1, 196)=16.33, p<.001, \eta^2_p=0.077$ . The second ANOVA, for  $\text{Log}_2\text{Morality}$ , revealed a significant main effect of beliefs,  $F(1, 196)=7.67, p=.006, \eta^2_p=0.035$ , and a significant interaction between emotions and beliefs,  $F(1, 196)=11.19, p=.001, \eta^2_p=0.052$ , but no main effect for emotions,  $F(1, 196)=1.77, p=.185$ .

Subsequent contrast analyses incorporated Dunn-Šidák corrections to compare the control group's mean with the means of the four groups defined by the between-subjects factors in total and separately. For  $\text{Log}_2\text{Conformity}$ , the control group did not significantly differ from all the other groups in general ( $p=.954$ ) or three of the groups in particular: no guilt/non-deontological ( $p=.319$ ), no guilt/deontological ( $p=.434$ ), and guilt/non-deontological ( $p=.079$ ). However, a significant difference was observed for the guilt/deontological group,  $t(245)=3.486, p=.003$ . A comparable pattern emerged for  $\text{Log}_2\text{Morality}$ : the contrast between the control group and the guilt/deontological group was significant,  $t(245)=4.451, p<.001$ , but the other contrasts were nonsignificant: for the four groups taken together ( $p=.142$ ), for no guilt/non-deontological ( $p=.553$ ), for no guilt/deontological ( $p=.839$ ), and for guilt/non-deontological ( $p=.999$ ). Summing up, these detailed analyses also support the hypotheses and show that the significant effects for beliefs, emotions, and the penitence congruity effect (interaction) result from salient evaluations by participants in the guilt/deontological condition.

## Discussion

Our research extends previous studies examining children's reasoning about norm violations. In line with findings from adult populations, our study indicates that children consider multiple factors when formulating moral judgments (Bregant et al., 2019; Neary & Friedman, 2014; Rhodes & Chalik, 2013). Specifically, we observed that school-aged children provide nuanced evaluations of scenarios involving breaches of both moral and conventional norms. In these evaluations, children weigh the expressed emotions and beliefs of the wrongdoer. This reinforces the observation of the penitence congruity effect (Paruzel-Czachura & Bialek, 2022), suggesting that expressing both types of penitence enhances the perception of the wrongdoer's morality.

Past research emphasized the influence of guilt on children's moral judgments (Cohen et al., 2012; Darby & Schlenker, 1989; Ohbuchi & Sato, 1994; Robinson et al., 2012; Smith & Harris, 2012; Vaish et al., 2011). An essential contribution of our study is the observation that when the wrongdoer does not believe their actions are immoral (i.e., expresses non-deontological beliefs), this diminishes the impact of their expressed guilt. In essence, expressing guilt alone is insufficient because the wrongdoer's ethical beliefs also play a significant role in influencing judgments of their morality.

These results are relevant to several areas in psychology. They offer valuable insights into moral psychology by highlighting that moral decision-making appears to start earlier than indicated by prior research. They contribute to developmental psychology by showing how children's moral judgments evolve and emphasizing the various aspects that shape their cognitive processes. In forensic psychology, our findings suggest that factors beyond just behavior are relevant for younger age groups. This new understanding might be useful within the judicial system, suggesting a reconsideration of how people use information on moral development. Our study also offers insights into educational psychology and may guide policies on children's moral education. Additionally, our findings have relevance in sociological research on social norms, demonstrating the penitence congruity effect in the context of conventional transgressions.

The interdisciplinary nature of our findings transcends into ethics, as they could potentially be integrated into various ethical theories. For instance, they align with the person-centered theory (Uhlmann et al., 2015). Within the framework of this theory, individuals are driven to evaluate not only the ethical correctness of actions but also the inherent character of the individuals behind those actions. This emphasis on character assessment goes beyond the binary categorization of actions as right or wrong. Some

actions offer more precise insights into an individual's moral character, playing a more significant role in forming moral judgments. Assessments of actions and character can differ, leading to act–person discrepancies. It simply means that people evaluate a person holistically, considering more available information about wrongdoers, not just their behaviors. Our study supports this theory, showing that it occurs at an earlier age than previously assumed.

Furthermore, our findings contribute to ongoing debates on defining morality (Malle, 2021; Sinnott-Armstrong & Wheatley, 2012), a topic lacking consensus among philosophers and psychologists today (Gert & Gert, 2017; Stich, 2018). Our study supports conceptions that emphasize behavioral, cognitive, and emotional dimensions of morality (Dahl, 2023; Paruzel-Czachura, 2023). These definitions underscore that morality encompasses not only actions but also cognitive and emotional engagement with moral domains. This enriches traditional moral psychology centered on reasoning (Turiel, 2018), accentuating the significance of moral intuition and emotion (e.g., Greene, 2013; Haidt, 2012).

Our findings have practical implications for professionals, including educators, policymakers, behaviorists, and psychosociologists, interested in promoting children's moral growth. Firstly, it is essential to recognize that morality significantly influences first impressions, often more than competence (Brambilla et al., 2021; Goodwin et al., 2014; but see Stasiuk et al., 2023 for an alternate perspective). Hence, it is vital to instill a sense of “moral competence” in children, as it shapes their interpersonal relationships and will influence their future professional endeavors. Secondly, it is worth teaching about the complexity of moral judgments. Despite the absence of clear-cut answers regarding right and wrong, common inclinations in moral evaluations may exist. One such tendency is the penitence congruity effect, wherein wrongdoers expressing guilt and acknowledging their actions as erroneous tend to receive more lenient judgments. Thirdly, children demonstrate sensitivity to others' moral feelings and moral beliefs regarding wrongdoing. This sensitivity holds potential not only for teaching children how to address their own missteps to mend social standing but also for guiding their responses to others' transgressions. Such teachings can cultivate heightened empathy and consideration for the emotions and beliefs of others. Fourthly, considering implications for educational approaches and systems, a critical emphasis rests on appropriate responses when children exhibit guilt and deontological beliefs post-wrongdoing. Responsiveness to children's emotional and cognitive reactions toward their mistakes is paramount. Acknowledging that children are in the process of internal norm development, it is imperative to afford them room for errors. Guiding their moral maturation becomes

the responsibility of adults, which includes setting a positive example and showing sensitivity as evaluators by appreciating children's emotional and cognitive responses.

Our results must be interpreted considering several limitations. The stories might be difficult to believe for some children because the conflicting information in these conditions seems to undercut itself, i.e., why or how could a person feel guilty about what they did but not believe it is wrong? Alternatively, how could a wrongdoer believe what they did is wrong but not feel guilty? It is possible that when reading this kind of vignette, children disbelieved the information about guilt, thinking to themselves that the person cannot feel genuinely guilty (Paruzel-Czachura & Bialek, 2022). Furthermore, vice versa – information about reformed moral belief would be undercut by concurrent information that the person does not feel guilty. However, to cope with this limitation and ensure that children understand the stories, we sampled children aged 10–11 because they can understand others' perspectives and such nuances vignettes. Wrongdoer's emotions and beliefs might sometimes be incongruent; see the example of Bonnie described by Garcia (2017), who killed her child and felt guilty but thought this was an ethically sound decision to kill. Future replications of these findings are highly recommended, especially focusing on children of different ages. Research could also focus on identifying the age at which the penitence congruity effect starts to appear and look at the penitence congruity effect from the developmental perspective (Killen & Smetana, 2023). It is recommended to study the ability to understand others' perspectives as measured by the theory of mind tasks. Finally, studying the penitence congruity effect among children in different cultures would also offer insights into the potential generalizability of our findings (Simons et al., 2017). Moral judgments may vary across cultural contexts (Awad et al., 2020; Graham et al., 2018; Sorokowski et al., 2020; Walker et al., 2021). Our study also has a limitation in its sample drawn from a society classified as WEIRD (i.e., Western, Educated, Industrialized, Rich, and Democratic; Henrich et al., 2010). Countries like the USA, Belgium, Poland, and New Zealand fall under this classification, whereas China, India, Japan, and South Africa do not. The term WEIRD was coined to highlight the prevalent sampling bias in many psychological studies, which can disproportionately represent this specific demographic despite its relatively minor presence in global cultural and societal diversity. Therefore, findings from studies on WEIRD populations may not hold universally. In our research context, this implies potential cross-cultural variations could influence the penitence congruity effect we observed.

## Conclusions

Our findings contribute to the evolving discourse in moral psychology, illustrating the complexity of children's moral judgments. While earlier research showed that children look mainly at the wrongdoers' behaviors when evaluating their morality, our results emphasize the significance of wrongdoer's ethical beliefs and emotions as factors impacting children's moral judgments about them. If a wrongdoer expresses guilt and admits their mistake, children are more lenient in their judgment, also when compared to the control conditions without any information on the wrongdoer's emotions and beliefs. This way, we replicated the penitence congruity effect among children. Simply put, not only the behavior itself but also what the wrongdoer feels and thinks matters for children when they assess other's morality.

**Data Availability** All the data, analysis codes, and study materials are available at <https://osf.io/dyzm5/>.

## Declarations

**Statements and declarations** No funding was received for conducting this study. The authors have no relevant financial or non-financial interests to disclose. This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of the University of Silesia in Katowice. Informed consent was obtained from all individual participants included in the study.

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