

Social Psychological Bulletin

Only the Good Cry: Investigating the Relationship Between Crying Proneness and Moral Judgments and Behavior

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Social Psychological Bulletin, 2022, Vol. 17, Article e6475, <https://doi.org/10.32872/spb.6475>

Received: 2021-03-31 • Accepted: 2022-09-01 • Published (VoR): 2022-11-02



Handling Editor: Robert Balas, Institute of Psychology, Polish Academy of Sciences, Warsaw, Poland

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Supplementary Materials: Data, Materials, Preregistration [see [Index of Supplementary Materials](#)]



Abstract

People cry for various reasons and in numerous situations, some involving highly moral aspects such as altruism or moral beauty. At the same time, criers have been found to be evaluated as more morally upright—they are perceived as more honest, reliable, and sincere than non-criers. The current project provides a first comprehensive investigation to test whether this perception is adequate. Across six studies sampling Dutch, Indian, and British adults ($N = 2325$), we explored the relationship between self-reported crying proneness and moral judgments and behavior, employing self-report measures and actual behavior assessments. Across all studies, we observed positive correlations of crying proneness with moral judgments ($r = .27$ [.17, .38]) and prosocial behavioral tendencies and behaviors ($r = .20$ [.12, .28]). These associations held in three (moral judgment) or two (prosocial tendencies and behaviors) out of five studies when controlling for other important variables. Thus, the current project provides first evidence that crying is related to moral evaluation and behavior, and we discuss its importance for the literature on human emotional crying.

Keywords

emotional crying, morality, tears, prosocial behavior



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Highlights

- People who visibly cry are typically evaluated as more morally upright, that is, more honest or reliable.
- Despite such attributions, it is unclear whether individuals who are more likely to shed tears in fact also show higher moral judgements and behavior.
- This project tests the association between self-reported crying proneness and moral evaluations and behavior.
- Meta-analyzing six studies suggests that people who are more prone to cry also place a higher focus on morality in their judgements and actions, an association that could not be fully explained by other variables such as increased emotionality or social desirability.

A classical conception argues that only *good* people cry (Petitus, 1661). Emotional crying, a uniquely human feature, frequently occurs in response to one's own or other people's (emotional) pain and suffering and when witnessing or experiencing situations involving high moral virtue such as altruism, self-sacrifice, eternal love, or the good overcoming the bad (Vingerhoets, 2013). Further, crying individuals have been evaluated as warmer, more honest, more sincere, and reliable quite consistently across different cultures (Picó et al., 2020; Van de Ven et al., 2017; Van Roeyen et al., 2020; Zickfeld et al., 2021).

However, there is hardly any evidence of whether these judgments are overall appropriate—are people who are more prone to cry indeed more likely to act in morally right ways? Are frequent tears associated with a greater willingness to display prosocial behavior and a greater tendency to disapprove of moral transgressions?

Definitions and theorizations of *morality* have been manifold, reflecting the complex nature of this concept and suggesting uni- or multidimensional aspects or domains that govern moral evaluations and behavior (e.g., Curry et al., 2019; Graham et al., 2013; Gray et al., 2012). In general, morality might be defined as practices, values, or norms that are put forward and agreed upon as *right* or *wrong* in a given society (Gert & Gert, 2020) and that foster cooperation among its members (Curry et al., 2019; Haidt, 2012).

The importance of emotional responses in moral evaluations and behavior has been emphasized repeatedly (Haidt, 2003b; Tangney et al., 2007). *Self-conscious* emotions such as *shame*, *guilt*, and *embarrassment* have been linked directly to the interests or welfare of the society or other individuals (De Hooge et al., 2007; Haidt, 2003b). Similarly, there is some evidence that feelings of *disgust* affect moral judgment or behavior, suggesting that moral disgust may have evolved from physical disgust (Haidt et al., 1997; Tybur et al., 2009; though see Landy & Goodwin, 2015). Next to negative emotions, several positive emotions, including *pride*, *elevation*, and *gratitude*, have been argued to influence moral evaluations and behavior (McCullough et al., 2001; Tangney et al., 2007). For instance, the emotion of elevation reportedly occurs when people witness acts of high moral beauty

or *purity*, which subsequently results in prosocial behavior (Haidt, 2003a; Pohling & Diessner, 2016; Thomson & Siegel, 2017).

Human emotional crying represents an expressive behavior that can accompany various emotions and situations (Vingerhoets, 2013). While it has been most commonly associated with the expression of *sadness* (Cordaro et al., 2016, 2020) and *powerlessness* (Vingerhoets, 2013), there is evidence that tears are shed when experiencing different negative (Scheirs & Sijtsma, 2001) and positive emotions (Zickfeld et al., 2020). For example, a recent project uncovered that positive tears are mainly shed due to four different themes: *achievement*, *affection*, *beauty*, and *amusement*, many of which touch upon moral themes (Zickfeld et al., 2020). Participants further reported crying over moral emotions such as *pride*, *being moved* or *elevation*, and *gratitude*. Observing others' moral behavior, such as acts of altruism or sacrifice, seem to be common elicitors of emotional crying (e.g., Schnall et al., 2010; Seibt et al., 2017). Moreover, focusing on the elicitors of human emotional crying, a recent project differentiated among different types of tears: *attachment*, *societal*, *compassionate*, and *moral* or *sentimental* tears (Denckla et al., 2014). Moral tears were argued to capture "experiences associated with moral or humane encounters" (Denckla et al., 2014, p. 627) and included situations revolving around altruism, achievement, or vastness. Emotional crying might be related to moral judgments and behavior because it commonly occurs when experiencing moral emotions and because crying, especially the tears, might act as *exclamation marks*, highlighting the importance of values that transcend beyond the self (Vingerhoets & Bylsma, 2016).

Is emotional crying associated with moral judgment or behavior, or does it relate to more specific aspects of morality? Some theories have proposed different moral domains. For example, moral foundation theory (Graham et al., 2011, 2013) argues that five (and probably more) different innate moral domains relate to moral evaluations and behavior: *care/harm*, focusing on the protection of kinship, *fairness/cheating*, focusing on equality and reciprocity, *loyalty/betrayal*, focusing on challenges to the group, *authority/subversion*, focusing on hierarchies, and *sanctity/degradation*, focusing on purity. From a developmental perspective, emotional crying as a communicative signal of requesting help would be most strongly related to the adaptive challenge of the care/harm domain—caring for children (Vingerhoets, 2013; Zeifman, 2012). Indeed, Vingerhoets (2013) and Denckla et al. (2014) list several crying-inducing situations that are specifically related to the care/harm domain, such as the birth of a child, people helping each other selflessly, or seeing others in need. Similarly, the related emotions of compassion and sadness (Graham et al., 2013; Gray & Wegner, 2011) have been particularly closely linked to emotional crying. Nevertheless, emotional crying might occur for instances and emotions related to the other foundations such as cooperation among individuals (fairness/cheating), being part of a very close group, or camaraderie (loyalty/betrayal).

There is quite consistent evidence that tears convey the image of adequate moral functioning. Across two studies manipulating visual tears on photographs, it was found

that tearful individuals were perceived as more sincere and honest (Picó et al., 2020). These studies also found that tears might reduce the suggested punishment for immoral actions in some situations. The finding that tearful individuals are perceived as more honest and reliable was replicated in a recent cross-cultural investigation across 41 countries (Zickfeld et al., 2021). This project and previous studies also found that tears increase judgments of warmth (Van de Ven et al., 2017; Zickfeld et al., 2018). Therefore, people displaying emotional tears seem to be judged generally as positive and morally upright (see Van Roeyen et al., 2020 for boundary conditions). It should be noted that although crying can be socially desirable or reflect a social norm in some situations, it might not necessarily be perceived as socially desirable across every situation, for example, in a work context, when trying to communicate competence, or in situations in which there exist strong gender norms with regard to emotional expressivity (e.g., Fischer et al., 2013; MacArthur & Shields, 2015; Motro & Ellis, 2017; Wróbel et al., 2022).

Considering the link between emotional crying and moral emotions and the social information about emotional crying, we hypothesized that individuals who are more prone to shedding emotional tears should be more likely to and/or more strongly reject moral transgressions and should show higher tendencies to engage in prosocial behavior. Specifically, we hypothesized that:

H1: Crying proneness is positively associated with the disapproval of moral transgressions and the tendency to display prosocial behavior.

H2: The association in H1 holds when controlling for other variables known to influence crying proneness or moral judgments and behavior, such as disgust proneness, empathy, and age.

The Present Studies

We designed six studies to investigate the relationship between crying proneness and judgments of moral transgressions and prosocial tendencies or behavior. In Studies 1, 2, and 5, the focus was on self-reported dispositional prosocial behavior, in Study 3 on self-reported frequency of prosocial behavior. Further, in Study 4 and 6, we measured actual prosocial behavior by either presenting participants with a tedious task that enabled them to earn money for charity or by having participants allocate money between themselves and another participant. As Studies 1–4 focused on the relationship between crying proneness and general moral judgments, we further explored this relationship in more depth by focusing on different moral domains (Graham et al., 2011) in Study 5–6. In addition, we took into account several covariates that could influence crying proneness, prosocial reports, and moral evaluations. More precisely, we included a measure of disgust proneness (Study 1–4), as physical disgust was associated with moral disgust in previous studies (Chapman & Anderson, 2014). Additionally, the project included a measure of emotional expressivity (Study 1–3) to ascertain that the association with crying proneness is not based on some general disposition to react highly emotionally

to any situation. We also measured social desirability (Study 1–4) to control the possible report of high prosocial tendencies and moral judgments because it is socially desirable (Nederhof, 1985). The project also controlled for general dispositions in empathy (Study 2–4), as research suggests that an individual's empathic capacity is a strong predictor of prosocial and moral responses (Batson, 2010). Finally, we controlled for well-being (Study 2–4), fear of sadness (Study 2–4), nostalgia proneness (Study 3–4), trust, the need to belong, and social dominance orientation (Study 5) as these variables might influence both crying proneness and prosocial responses and moral judgments (Aknin et al., 2013; Juhl et al., 2020; Reed et al., 2019; Twenge et al., 2007; Vingerhoets, 2013; Weinstein & Ryan, 2010). The six studies were conducted across Dutch (Study 1–2 & 5), Indian (Study 3), and British (Study 4 & 6) undergraduates and the general population, with the British sample in Study 4 being representative according to gender, age, and ethnicity.

All studies were approved by the Ethics Review Board of the School of Social and Behavioral Sciences, Tilburg University. Studies 4 and 6 were registered before data collection, and we explicitly note deviations from the registered protocol. We report all measures and exclusions, and the data, syntax, registration, and material can be openly accessed via the [Supplementary Materials](#). As the methods of all studies were quite similar and included the same or similar measures, we report the specific methods and results combined for all studies.

Method

Participants

Study 1

We collected data from 497 Dutch participants recruited as part of a research pool at Tilburg University and who received partial course credit for completion or via social media. After removing participants who failed to respond to at least 95%¹ of the survey ($n = 147$) or reported an age lower than 18 ($n = 19$), the final sample consisted of 331 participants (88 males, 243 females) ranging from 18 to 80 years of age ($M = 28.09$, $SD = 14.00$).

Study 2

The sample included 386 Dutch participants recruited via a research pool at Tilburg University or via social media. After applying the same exclusion criteria as in Study

1) Note that we originally employed different exclusion rates across the studies (Study 1–3, 50%, Study 4, 70%). In order to increase the consistency of this process and to retain more high-quality data, we decided to apply a criterion of 95% across all studies. The main results including the original criteria are provided in the [Supplementary Materials](#) (Section 13). Importantly, this did not change the main results and conclusions.

1 (excluding participants below the age of 18, $n = 2$, and excluding participants failing to respond to more than 95%¹ of the survey, $n = 71$), the final sample consisted of 315 participants (105 males, 208 females, 8 missing) ranging from 18 to 81 years of age ($M = 41.81$, $SD = 15.64$).

Study 3

Data were collected from 371 Indian participants via social media. When applying the same exclusion criteria as in the previous studies (below 95%¹ completion rate, $n = 119$, age below 18, $n = 1$), the final sample included 251 participants (108 males, 140 females, 1 other, 2 missing) ranging from 18 to 83 years of age ($M = 30.36$, $SD = 10.28$). Most participants indicated Indian nationality (246, 1 other, 4 missings).

Study 4

In total, we collected 697 UK-based participants via Prolific.co. We applied Prolific's representative screening, collecting participants representing the UK population according to gender, age, and ethnicity. Importantly, our sample is not representative of the whole UK population but represents the population according to these three variables. After excluding participants because they failed to respond to more than 95%¹ of the items, we retained a final sample of 676 participants (348 females, 304 males, 24 missings) ranging from 18 to 82 years of age ($M = 46.73$, $SD = 15.47$). The majority indicated that they were UK citizens ($n = 587$; 87%). Participants were compensated £2.22 for the main task and could obtain a possible bonus payment of up to £0.90 depending on their performance on a visual search task.

Study 5

We collected 224 Dutch participants via social media (e.g., Facebook, LinkedIn)². After excluding participants because they failed to respond to more than 95% of all items, we retained a final sample of 166 participants (124 females, 42 males) ranging from 18 to 72 years of age ($M = 36.7$, $SD = 15.9$).

Study 6

We collected 603 UK-based participants via Prolific.co. As registered, participants were excluded if they failed an attention check ($n = 2$), reported a younger age than 18 ($n = 0$), or completed the survey faster than 1/3 of the median duration or slower than three times the median duration ($n = 15$). Although not registered, we also excluded participants that did not respond to more than 95% of the items ($n = 0$). The final sample

2) Study 5 was originally conducted as part of a thesis (Oostelbos, 2018).

included 586 participants (290 females, 295 males, 1 non-binary) ranging from 19 to 89 years of age ($M = 41$, $SD = 13.20$).

Sample Size Decisions

Across all studies, we did not perform a specific a-priori power analysis but mainly focused on collecting as many participants as possible (Lakens, 2022). We tried to reach a sample size of at least $n = 200$ for all studies based on previous simulations on when correlation coefficients stabilize (Schönbrodt & Perugini, 2013). For Study 4, we registered that we would recruit a minimum of 600 participants to achieve enough power for smaller effects that we anticipated due to the focus on associations between self-report and actual behavior. Study 6 was conducted as a screening study for a different unrelated project, and sample size determination was based on resources available for the different study (see Supplementary Material Section 1). We registered to collect 600 or 1200, depending on the outcome of the other unrelated study. Performing a two-tailed sensitivity analysis in G*Power 3.1 (Faul et al., 2009) with an alpha level of .05 suggests that we could detect correlation coefficients of magnitude between +/- .08 and .15 with 90% power across the studies (see Supplementary Figure S1).

Procedures

Procedures were similar across all studies. Questionnaires were created and hosted using Qualtrics. Participants provided informed consent and were given instructions about the specific study. In all studies, participants then completed the same or similar scales as provided in Table 1. The crying proneness scale (Denckla et al., 2014; our independent variable) was always completed first, and the remaining measures were presented afterward in a fixed (Study 1–2, 5) or individually randomized order (Study 3–4, 6).

Table 1
Overview of Scales Employed in Study 1–6

Variable	Source	Scale	# Items	Example Item	$\alpha/M (SD)$							
					Study 1	Study 2	Study 3	Study 4	Study 5	Study 6		
Predictor												
Crying Proneness Scale	(Denckla et al., 2014)	1 (Very unlikely) to 7 (Very likely)	28	"A wedding ceremony"	.96 (1.34)	3.52 (1.23)	.92 (1.04)	.96 (1.19)	3.13 (1.40)	.97 (2.43) ^a	.96 (1.18)	3.34 (1.18)
Outcome												
Prosocial Behavior	(Rushton et al., 1981)	1 (Never/Not characteristic at all) to 5 (Very often/Very characteristic)	20	"Giving money to charity"	.78 (.42)	3.59 (.44)	.89 (.64)	3.20 (.64)	.82 (.44)	3.51 (.44)	3.51 (.44)	3.51 (.44)
Letter Search Task				Total number of letters <i>n</i> clicked				55.09 (53.95)				.50 (.23)
Social Value Orientation	(Murphy et al., 2011)	6		Allocating money between themselves and another participant								
Moral Judgments	(Chapman & Anderson, 2014)	0 (Not at all) to 10 (Extremely)	30	"Someone jumps the queue at a popular attraction in a theme park"	.92 (1.21)	6.98 (1.29)	.97 (2.10)	6.88 (2.10)	.91 (1.01)	7.03 (1.01)	7.03 (1.01)	7.03 (1.01)
Integrity Scale	(Hugh-Jones, 2016; Whiteley, 2012)	1 (Always Justified) to 4 (Never Justified)	15	"Buying something which you know is stolen."				.83 (.39)	3.29 (.39)			
Moral Foundations Scale (Care/Fairness/Loyalty/Authority/Sanctity)	(Graham et al., 2011)	1 (Not at all relevant/Strongly disagree) to 6 (Extremely relevant/Strongly agree)	30	"I am proud of my country's history"					.62 (.66)	4.43 (.66)	.72 (.69)	4.65 (.78)
									.62 (.60)	4.43 (.60)	.67 (.70)	4.64 (.70)
									.56 (.56)	3.35 (.77)	.77 (.83)	3.36 (.83)

Variable	Source	Scale	# Items	Example Item	$\alpha/M (SD)$						
					Study 1	Study 2	Study 3	Study 4	Study 5	Study 6	
Covariates											
Disgust Sensitivity	(Olatunji et al., 2008)	0 (Not disgusting at all)	13	"You see maggots on a piece of meat in an outdoor garbage pail"	.81 (.64)	.78 (.99)	.83 (.73)	.82 (.98)	.21 (.98)	.80 (.98)	2.52 (.98)
Emotional Expressivity	(Gross & John, 1995)	1 (Strongly disagree)	16	"Whenever I feel positive emotions, people can easily see exactly what I am feeling."	.77 (.51)	.88 (.96)	.80 (.82)	4.62 (.82)			
Social Desirability	(Marlowe-Crowne, Reynolds, 1982)	1 (False)	15/13 ^c	"No matter who I'm talking to, I'm always a good listener"	.67 (.18)	.62 (.17)	.62 (.19)	1.59 (.19)	.74 (.24)	1.50 (.24)	
Well-Being	(WHO-5 well-being index; Topp et al., 2015)	1 (At no time)	5	"Over the past 2 weeks, I have felt cheerful and in good spirits."	.82 (1.06)	5.30 (1.06)	.87 (1.08)	4.09 (1.08)	.91 (1.13)	3.51 (1.13)	
Empathy	(Basic Empathy Scale (BES-A); Carré et al., 2013)	1 (Strongly disagree)	20	"I get caught up in other people's feelings easily."	.81 (.31)	2.93 ^d (.31)	.72 (.39)	3.15 (.39)	.89 (.50)	3.27 (.50)	
Fear of Sadness	(Taylor & Rachman, 1991)	1 (Not at all)	12	"Entering places where you have been sad."	.85 (.70)	2.41 (.70)	.89 (.80)	2.49 (.80)	.85 (.65)	2.01 (.65)	
Nostalgia	(Southampton Nostalgia Scale; Routledge et al., 2008)	1 (Not at all/Once or twice a year)	7	"How valuable is nostalgia for you?"	.90 (1.32)	4.53 (1.32)	.94 (1.32)	4.62 (1.34)		4.62 (1.34)	

Variable	Source	Scale	# Items	Example Item	$\alpha/M (SD)$					
					Study 1	Study 2	Study 3	Study 4	Study 5	Study 6
Nostalgia Prominence	(Cheung et al., 2017)	1 (I do this rarely/ This is not important to me) 7 (I do this very often/This is very important to me)	5	"I bring to mind rose-tinted memories"			.90	4.39 (1.20)		
Need to belong scale	(Leary et al., 2013)	1 (Strongly Disagree) 5 (Strongly Agree)	10	"I do not like being alone"					.87	3.38 (.67)
Trust	General Trust Scale (Yamagishi & Yamagishi, 1994)	1 (Strongly Disagree) 5 (Strongly Agree)	6	"Most people are trustworthy."					.74	3.58 (.56)
Social Dominance Orientation	SDO ₍₆₎ (Ho et al., 2015)	1 (Strongly Disagree) 5 (Strongly Agree)	8	"No one group should dominate in society."					.87	2.44 (.48)

^aRated on a scale from 0 (Very Unlikely) to 7 (Very Likely) in Study 1 and 5. ^bRated on a scale from 1 (Strongly disagree) to 5 (Strongly agree) in Study 1. ^cWe employed 15 items in Study 1 and 2 and 13 items in Study 3 and 4. ^dScale from 1 (Strongly Disagree) to 4 (Strongly Agree) in Study 2.

Visual Search Task (Study 4)

After completing all self-report measures, participants were informed that they could earn additional money for a charity of their choice by participating in a visual search task in Study 4. The visual search task implied the identification of the lower case letter 'n' by clicking on it in twenty-five 25 * 40 matrices, containing a total of 22,500 letters, with 200 'n's randomly distributed in it. Each correctly identified 'n' yielded .05€ for the participant. Thus, each participant could earn a maximum of 10€ when successfully identifying all 'n's. However, 90% of the money earned with this task was donated to one out of three possible charity organizations that they were able to choose from (*British Red Cross* ($n = 158$), *Save the Children UK* ($n = 224$), and *WWF* ($n = 195$)). In total, we donated 1662.98€ ($M = 2.54€$, $SD = 2.41€$). Ninety-eight participants (14.50%) decided not to participate in the visual search task. Participants were able to quit the visual search task at any time, in which case they were directed to a final set of questions asking about their demographic background. To increase the authenticity of the donation task, we provided our contact information and instructed participants to get in contact in case they would like to know about the final amount of donated money. In addition, we sent participants a private message detailing the total amount of money collected in Prolific upon completion of the study (thereby ensuring participants' anonymity). The remaining 10% of the earned money was paid to the participants as a bonus payment (resulting in a maximum bonus payment of 1€, $M = 0.28€$, $SD = 0.27€$). This was done to provide an incentive for participants to engage in the task. As many individuals use crowdsourcing sites such as Prolific.co as a basis for additional income, providing such incentives is important (Palan & Schitter, 2018). The hourly compensation of £9.87 for the main study (*median* duration: 13.5 minutes, £2.22 compensation) was above the minimum hourly wage and Prolific's suggested hourly payment of £8. In comparison, participants spent an additional time of *median* = 15.40 minutes (*range*: 0–112.13 minutes) on the letter search task, resulting in an hourly compensation of £3.51 when considering the maximum bonus and £1.01 when focusing on the mean bonus payment. Thus, it is unlikely that participants engaged in the letter search task because the main task did not pay enough, and they felt they needed to earn more money. In addition, the hourly compensation of the letter search task was so low that it is unlikely that participants engaged primarily in it to earn a bonus payment. Therefore, we consider the current task a measure of prosocial behavior, as the mind-numbing and tedious visual search task incurs far more costs than individual benefits (in the form of the bonus payment).

Measures

We employed the same measures for most constructs across all studies. An overview of the specific measures, their internal reliability, and means for each separate study is presented in Table 1.

Predictor (Crying Proneness)

Across all studies, we employed the crying proneness scale (CPS; Denckla et al., 2014), which measures the likelihood that participants will shed tears in a given situation. The scale asks participants to rate 28 situations based on the following instruction: "How likely is it that you are touched to the point of tears when you experience/see/read/hear the following events, when you read a book, see a documentary or a movie?". Situations can further be categorized into four different tear types identified in previous research: *attachment tears*, *societal tears*, *compassionate tears*, and *sentimental or moral tears* (Denckla et al., 2014). Attachment tears are shed in response to essential bonds, including separations and reunions. Societal tears concern group processes such as conflicts in a group. Compassionate tears refer to observing others in need or pain, and sentimental tears refer to moral situations, specifically positive ones. Similarly, recent findings suggest that the CPS can be divided into situations referring to negative and positive tears (Zickfeld et al., 2020).

Outcome (Moral Judgments and Behavior)

We focused on two different operationalizations of *moral judgments* and *behavior*. First, participants rated to what degree they considered specific actions morally wrong, reflecting the evaluation of moral transgressions or indicated which domains they deem important when making moral judgments. In Study 1–3 & 5, participants were provided with 30 different statements (e.g., "Someone does a false confession to help a friend who has been arrested by the police") and asked how *morally wrong* they perceived them to be. In Study 4, participants were provided with 15 actions (e.g., "Lying in your own interests") and asked to indicate how frequently they are justified. We added another scale in Study 4 to evaluate the generalizability of the association between crying proneness and different scales focusing on moral judgment. Further, we tested in Study 5–6 how specific moral domains are related to crying proneness by asking participants how relevant they perceived different aspects to be when judging actions or situations as morally *good* or *bad* (Graham et al., 2011).

Second, we employed different measures to assess prosocial behavior. Prosocial behavior is often regarded as a type of moral behavior (Baron, 1997; Batson, 1991; De Groot & Steg, 2009) and has played an essential role in the evolution of morality (Norenzayan et al., 2016). In Studies 1, 2, and 5, we asked how characteristic 20 different prosocial actions (e.g., "Giving money to charity") are for the participant. In Study 3, we asked participants to report how often they engage in the same prosocial actions. Therefore, the outcome in Study 1, 2, and 5 can be regarded as a dispositional indicator, while the measure in Study 3 concerns the frequency of prosocial behavior. Finally, we measured actual prosocial behavior by participation in the visual search task (Study 4) and having participants divide money between themselves and another participant (Study 6; Murphy et al., 2011). In Study 4, we operationalized prosocial behavior as the number of *ns* identi-

fied by each participant (and thereby also the final amount of donated money). We also considered the total time devoted to the visual search task to indicate prosocial behavior (though this was not preregistered). In Study 6, we operationalized prosocial behavior by allocating money between themselves and another participant. Using the social value orientation slider task (Murphy et al., 2011), participants could choose between nine continuous payoff allocations across six items. The task allows calculating a continuous score that reflects different social value orientation types: *competitive*, *individualistic*, *prosocial*, and *altruistic*. The competitive type is characterized by increasing the payoff to the self while decreasing the payoff to the other, the individualistic type focuses mostly on increasing the payoff to the self, the prosocial type tries to generate a similar payoff for the self as the other, and the altruistic type attempts to allocate most to the other. In the present case, choices were incentivized with a bonus payment. Every 10 points resulted in 1p. Across the six items, participants always selecting the highest payoff for the self would result in 550 points (55p), and selecting the highest payoff for the other would result in 520 points (52p). Participants were told that they would be randomly paired with another person from the experiment and that they each had to decide on the other's bonus payment (as well as their own payment). Pairs were only matched after the experiment and were therefore anonymous and did not interact. Note, that it was not highlighted that the other person's outcomes would also determine the participants' additional bonus payment. Considering a prosocial orientation, the maximum number of points that could be derived while trying to maximize the outcome for *both* the self and the other would be 941 (£0.94). Participants gained a total of £553.31 across the experiment ($M_{self} = \text{£.51}$, $SD_{self} = \text{£.03}$; $M_{other} = \text{£.41}$, $SD_{other} = \text{£.05}$).

Covariates

We also included several variables that we considered as possibly influencing the outcome variable. Disgust sensitivity and social desirability were assessed in all studies. Emotional expressivity was evaluated in Study 1–3, well-being, empathy, and fear of sadness in Study 2–4, nostalgia in Study 3–4, need to belong, trust, and social dominance orientation in Study 5. A more detailed overview is provided in Table 1. Note that the selection of specific covariates was based on different theoretical considerations of which variables have been found to show associations with both crying proneness and moral judgments and behavior. The selection was preregistered in Study 4 only.

Demographic Variables

Across all studies, we recorded participants' gender, age, and nationality. We also assessed education in Studies 2 and 5 and relationship status in Studies 2–3 and 5. Finally, we probed for the participants' partial postcodes in Study 4 and 6.³

Results

For all analyses, we set our alpha level at .05. All analyses were performed using *R* (version 4.0.3; R Core Team, 2019). An overview of the main variables and their correlations for each study is provided in the [Supplementary Materials](#) (Table S1–S4). Across all studies, we performed two main models to test our hypotheses. First, we inspected zero-order correlations between crying proneness and the two main outcomes—moral judgments and prosocial behavior. To derive an average estimate for the association across studies, we conducted random-effects meta-analyses using the *metafor* package (Version 2.4-0, Viechtbauer, 2010). Second, we performed similar regression models controlling for the covariates included in the specific study. These two main analyses were registered for Study 4 and are denoted as *confirmatory* as they focus on testing our main hypotheses. It should be noted though that no analyses were registered for Studies 1–3, and 5. In Studies 5 and 6, we inspected zero-order correlations between crying proneness and the five moral foundations. This analysis was exploratory in Study 5 and registered for Study 6.

We further performed several exploratory analyses focusing on the relation of specific tear types, as identified by previous research, with moral judgments and behavior and connections among the predictor, outcomes, and covariates employing a network approach.

In Study 4, when inspecting the data, we realized that the visual search task did not accurately record the total number of letters identified for a part of the sample ($n = 107$). However, we always recorded the amount of time spent on the task. As the number of letters identified and the amount of time spent showed a considerably strong association (see [Supplementary Table 4](#)), and to increase our test's power, we repeated our main model with transformed time spent (see [Supplementary Table 7](#)). Correlations with the crying proneness scale were minimally stronger for time spent (correct answers: $r = .13$ [.04, .21]; time spent: $r = .14$ [.06, .21]). Before conducting the main analyses, we inspected our primary outcome variables and examined their distributions. Both the number of letters identified and time spent on the task showed a right-skewed distribution. We employed the *bestNormalize* package (Version 1.6.1, Peterson & Cavanaugh, 2019) to determine the best possible transformation procedure. For both variables, the procedure selected an ordered quantile transformation.

3) Postcode information can be obtained on request.

Confirmatory Analyses

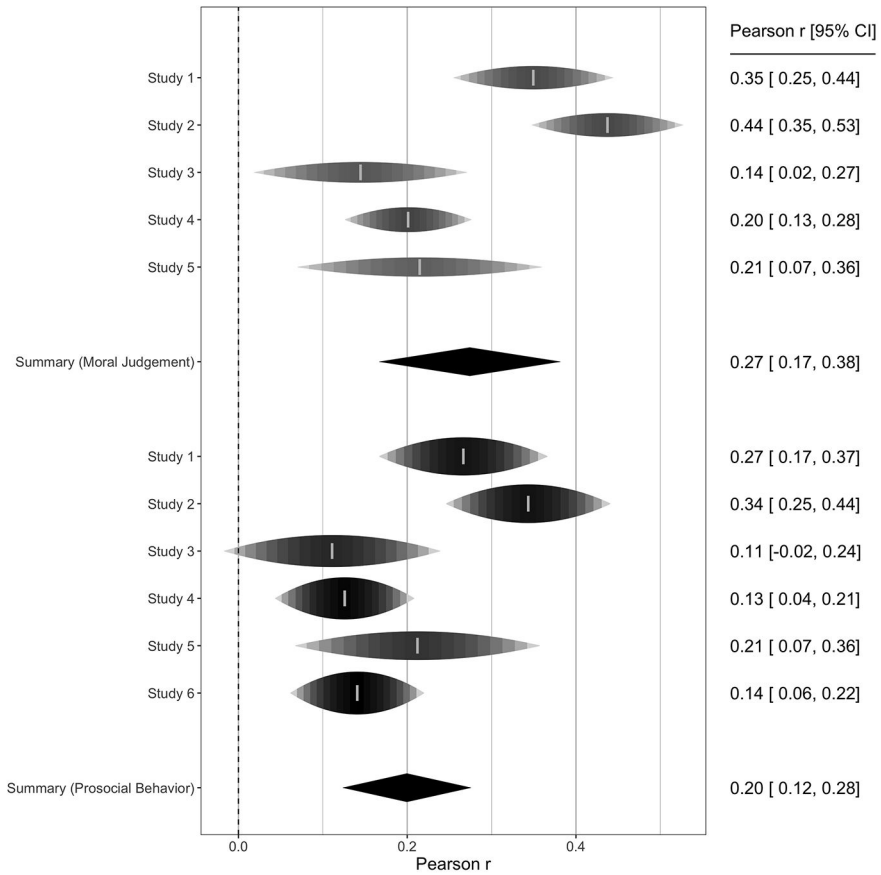
H1. Association Between Crying Proneness and Moral Judgments and Behavior

To test the association between crying proneness and moral judgments and behavior, we computed zero-order correlations between the crying proneness score and the two main outcome variables. Across all studies, we observed a positive correlation between crying proneness and moral judgments, $r = .27$ [.17, .38], $p < .001$. We observed heterogeneity across effects, $Q(4) = 23.24$, $p < .001$, $I^2 = 82.07$ [48.90, 97.80], which was influenced by stronger correlations in Study 1–2 and smaller correlations in Study 3–5 (Figure 1). To get a more detailed overview of this relationship, we focused on zero-order correlations between the crying proneness score and the five moral foundation ratings. An overview is presented in Figure 2. We observed positive correlations with all five foundations that varied in intensity and consistency. Both studies' strongest and most consistent associations were found for the *care/harm* domain, highlighting attachment and virtues of kindness or nurturance. The smallest associations across both studies were observed for *loyalty/betrayal* and *authority/subversion*.⁴

4) As registered for Study 6, we also performed two regression models with crying proneness as the outcome and the five moral foundations as predictors. Across both studies, care/harm emerged as the most consistent predictor when controlling for the other foundations (see Supplementary Table 17).

Figure 1

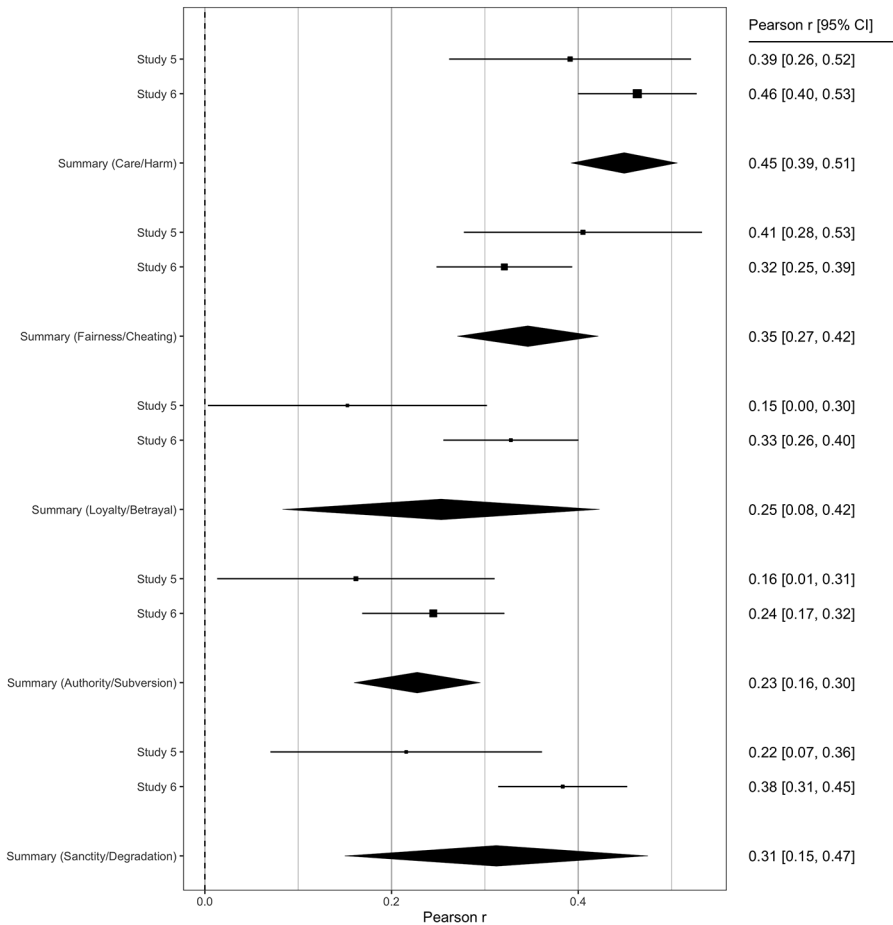
Forest Plot of Meta-Analysis Between Crying Proneness and Moral Judgments (Upper) and Prosocial Behavior (Lower)



Note. The prosocial measure in Study 4 refers to the total amount of identified letters, though the association is quite similar when focusing on time spent (see [Supplementary Material Table 4](#)).

Figure 2

Forest Plot of Meta-Analysis Between Crying Proneness and The Five Different Moral Foundations



Similarly, we observed a positive correlation between crying proneness and different prosocial behavior measures, $r = .20$ [.12, .28], $p < .001$. Again, we observed a significant amount of heterogeneity, $Q(5) = 16.96$, $p = .005$, $I^2 = 70.12$ [23.17, 94.82], mostly attributed to Study 1–2 again showing stronger correlations than Study 3–6. Note that we included different prosocial behavior measures (trait disposition, reported frequency, actual behavior), and these measures are expected to show associations of different magnitudes when correlated with general crying proneness reports. In sum, our data provided support for H1 that crying proneness is positively related to moral judgments and behavior.

H2. Crying Proneness Predicts Moral Judgments and Behavior Above and Beyond other Variables

We also tested the relationship between crying proneness and moral judgments and behavior when controlling for other important variables known to affect the predictor and outcomes. We conducted a regression model for each study, including moral judgments or prosocial behavior as the outcome, crying proneness as the predictor, and specific subsets of the other variables as covariates. We also controlled for gender and age in Studies 1–3 and 5, but not in Study 4 as we did not include it in our registration (results controlling for gender and age can be found in the [Supplementary Materials Tables 8–9](#)). An overview of all models is provided in [Table 2](#). Crying proneness significantly predicted harsher moral judgments of transgressions when controlling for the other variables in Study 1–2 and Study 4. However, crying proneness predicted prosocial behavior significantly when controlling for the remaining variables only in Study 1–2. Notably, though the effects were comparable in Study 4 and 5, they failed to reach statistical significance at the .05 level (crying proneness predicted time spent on the task significantly in Study 4, [Supplementary Table 7](#)). Overall, moral judgments were most consistently predicted by crying proneness and age when controlling for the other variables. Prosocial behavior was most consistently predicted by social desirability and empathy when controlling for the other measures.⁵ The findings partly support H2. Crying proneness seems a significant predictor of moral judgment and behavior but not consistently when taking into account other variables. We further explored this finding with the help of network models ([Supplementary Materials Section 10](#)).

5) We also explored the partial correlations between crying proneness and prosocial tendencies/behavior when controlling for social desirability and empathy respectively, finding that crying proneness predicted prosocial tendencies/behavior beyond social desirability, but not consistently when controlling for empathy ([Supplementary Materials Table 10](#)).

Table 2
Regression Results Using Prosocial Tendencies/Behavior and Moral Judgments as the Criterion in Study 1–5

Predictor	B [95% CI]				
	Study 1	Study 2	Study 3	Study 4 ^a	Study 5
Prosocial Disposition/Frequency/Behavior					
(Intercept)	1.75** [1.28, 2.22]	1.12** [50, 1.74]	.04 [-.92, 1.01]	-1.40** [-2.28, -.62]	3.22** [2.46, 3.97]
Crying Proneness (CPS)	0.04* [.00, .07]	0.05* [.01, .09]	0.05 [-.04, .13]	0.08 [-.00, .16]	0.04 [-.01, .09]
Disgust Proneness (DPSS)	-0.08* [-.15, -.01]	-0.03 [-.07, .02]	-0.06 [-.17, .06]	-0.05 [-.14, .04]	-0.05 [-.12, .03]
Emotional Expressivity (EES)	0.20** [.12, .29]	0.06 [-.00, .12]	0.02 [-.10, .14]		
Social Desirability (MCSD)	0.58** [.35, .80]	0.46** [.20, .73]	0.83** [.39, 1.28]	0.38* [.03, .73]	
Well-Being		-0.00 [-.04, .04]	0.12** [.04, .20]	0.05 [-.03, .12]	
Empathy		0.42** [.24, .59]	0.26* [.02, .51]	0.19* [.01, .37]	
Fear of Sadness (FOS)		-0.00 [-.07, .07]	0.05 [-.08, .17]	-0.03 [-.18, .12]	
Nostalgia Proneness (SNS)			0.07 [-.00, .14]	0.00 [-.06, .07]	0.03 [-.08, .13]
Need to Belong					0.09 [-.03, .21]
Trust					-0.15* [-.29, -.01]
Social Dominance Orientation (SDO)					.08 [-.08, .24]
Gender	0.11* [.01, .21]	-0.04 [-.16, .07]	-0.17 [-.35, .01]		0.00 [-.00, .01]
Age	0.00* [.00, .01]	0.01** [.00, .01]	0.01 [-.00, .02]		.14** [.02, .21]
Model Fit (R ²)	.23** [.14, .29]	.28** [.17, .33]	.27** [.13, .33]	.05** [.01, .07]	
Moral Judgments					
(Intercept)	3.50** [2.13, 4.86]	1.96* [.33, 3.58]	-2.88 [-5.92, .17]	2.10** [1.82, 2.37]	3.86** [2.31, 5.41]
CPS	0.13* [.03, .24]	0.22** [.11, .33]	0.03 [-.24, .29]	0.04* [.01, .06]	0.03 [-.07, .14]
DPSS	0.37** [.16, .57]	-0.03 [-.16, .10]	0.36* [.01, .72]	0.03 [-.00, .06]	-0.03 [-.18, .12]
EES	0.05 [-.20, .29]	0.04 [-.12, .19]	-0.12 [-.49, .25]		
MCSD	.43 [-.23, 1.09]	0.79* [.10, 1.49]	0.90 [-.49, 2.29]	0.62** [.49, .74]	
Well-Being		0.08 [-.03, .19]	-0.05 [-.29, .20]	0.01 [-.02, .04]	

Predictor	B [95% CI]				
	Study 1	Study 2	Study 3	Study 4 ^a	Study 5
Empathy		0.06 [-.41, .53]	1.96** [1.18, 2.73]	0.03 [-.03, .09]	
FOS		0.03 [-.16, .21]	-0.24 [-.64, .16]	0.03 [-.02, .08]	
SNS			0.19 [-.02, .41]	-0.02 [-.04, .00]	
Need to Belong					0.07 [-.15, .29]
Trust					0.07 [-.18, .32]
SDO					0.14 [-.15, .43]
Gender	0.28 [-.01, .57]	0.37* [.07, .66]	0.49 [-.06, 1.05]		0.68** [.35, 1.01]
Age	0.03** [.02, .04]	0.04** [.03, .05]	0.03* [.01, .06]		0.03** [.02, .04]
Model Fit (R ²)	.22** [.13, .28]	.43** [.33, .48]	.26** [.13, .32]	.20** [.14, .24]	.32** [.18, .40]

Note. Exact *p*-values are reported in the Supplementary Materials Table 11.

^aStudy 4 employed a different moral judgments measure (see Table 1) and measured actual prosocial behavior (total number of letters identified). *B* represents unstandardized regression weights, and numbers between brackets indicate the lower and upper limits of the 95% confidence interval. Gender is dummy coded across all studies (1 = male, 2 = female).

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

Exploratory Analyses

Correlations with Covariates

An overview of the relationship between crying proneness and the most commonly used covariates across the studies (emotional expressivity, disgust sensitivity, social desirability, empathy, fear of sadness, well-being) is provided in [Supplementary Figure S2](#). Crying proneness showed the strongest relationships with fear of sadness ($r = .37$ [.28, .46]), emotional expressivity ($r = .35$ [.26, .44]), empathy ($r = .34$ [.24, .43]) and disgust sensitivity ($r = .21$ [.17, .26]). We observed no statistically significant associations with social desirability ($r = .08$ [- .02, .19]) and well-being ($r = -.05$ [-.15, .04]).

Tear Types

We explored the relationship between moral judgments and prosocial behavior and crying proneness to different tear types (as defined by [Denckla et al., 2014](#); [Zickfeld et al., 2020](#)). We did not observe any systematic differences between proneness to negative or positive tears or proneness to *attachment*, *societal*, *sentimental*, or *compassionate* tears. Compassionate tears showed the strongest associations with moral judgments and prosocial behavior, but this did not differ statistically significantly from the other types. A detailed overview is presented in the [Supplementary Materials](#) (Figure S3).

Network & Moderation Analysis

We explored the data using network analyses in order to illustrate the relationships among the different variables. A detailed overview is provided in the [Supplementary Materials](#) Section 10. Across all studies, crying proneness was most consistently connected with emotional expressivity and empathy. Therefore, we followed up by exploring whether emotional expressivity and empathy moderated the effect of crying proneness on moral judgments and behavior across the studies. We only observed a significant interaction between crying proneness and emotional expressivity on prosocial behavior in Study 3 and between crying proneness and empathy on moral judgments in Study 4 (see [Supplementary Figures 5–6](#)).⁶

Differences in Crying Proneness between non-Donators and Donators in Study 4

Finally, we explored the difference between people donating any money in Study 4 by engaging in the visual search task and people not engaging in the task. We observed a higher crying proneness score for people participating in the visual search task ($M = 3.16$, $SD = 1.17$) in comparison to people not engaging in that task ($M = 2.92$, $SD = 1.27$, $d = .20$ [-.02, .43], $t(126.63) = -1.80$, $p = .075$), though this effect was not statistically significant.

6) Additional moderation models with age and gender are presented in the [Supplementary Materials](#) (Figures S7–S8).

General Discussion

We reported six studies to evaluate the hypothesis that people who tend to cry more easily also report higher moral judgments and behavior by showing stronger disapproval of moral transgressions and (a greater tendency to display) prosocial behavior, more specifically self-reported tendencies or frequencies, an actual effort to earn money for charity foundations, and allocation of money between another person and themselves. The studies were conducted in Dutch, Indian, and UK samples.

Crying Proneness and Moral Judgments and Behavior

Supporting H1, we observed that crying proneness is positively related to moral judgments and prosocial behavior across different samples and measures. Overall, the link with prosocial behavior was weaker, likely because Studies 4 and 6 focused on outcomes of actual prosocial behavior. Both associations showed a high degree of heterogeneity across studies. Based on commonly observed effects in social psychology, the current effects can be interpreted as *medium* (e.g., Lovakov & Agadullina, 2021) and are similar in magnitude to recent meta-analytic findings on personality and prosocial behavior (Thielmann et al., 2020). However, it should be noted that they only explain a limited degree of variance in the outcome variables. This association remained statistically significant when controlling for other variables known to affect crying proneness or moral behavior in two out of five studies for prosocial tendencies/behavior and in three out of five studies for moral judgments, thereby only partly supporting H2. Notably, there was high heterogeneity across the six studies. Variables that significantly predicted moral judgments and behavior in one study did not exhibit the same pattern in other studies. Across all studies, social desirability and empathy were observed as the most important predictors of prosocial behavior, while age and crying proneness most consistently predicted moral judgments when controlling for the other variables in the model.

The positive link between empathy and prosocial behavior has been shown consistently across studies (Ding & Lu, 2016; Eisenberg & Miller, 1987; Thielmann et al., 2020). As empathy also has a positive association with crying proneness (Denckla et al., 2014; Zickfeld, et al., 2020), something that was also replicated in the current studies (Supplementary Figure S2), these variables may interact to increase prosocial behavior. However, we did not find any evidence for this proposition in the present studies. Further, the link between social desirability and prosocial behavior was more substantial and more consistent in the current studies than the effects reported in a recent meta-analysis (Lanz et al., 2022), suggesting that the employed measures assessed socially desirable traits (and not social desirability bias) as discussed by Lanz and colleagues (2022). On the other hand, we did not find a statistically significant correlation between social desirability and crying proneness (Supplementary Table 10). As mentioned earlier, this is likely because crying might not be desirable and appropriate in certain situations

(Zickfeld et al., 2021). One could question whether crying proneness contributes to explaining variance in prosocial behavior beyond the more consistent predictors such as empathy and social desirability. Inspecting partial correlations among these variables in Studies 1–4 suggests that crying proneness predicts a fair share of prosocial behavior when controlling for social desirability, but this was less consistent when controlling for empathy (see [Supplementary Material Table 10](#)).

On the one hand, it seems interesting to consider how crying proneness predicts prosocial tendencies or behavior beyond social desirability. It is possible that emotional tears can act as an *exclamation mark* and highlight the focus on prosocial values beyond the individual (see [Vingerhoets & Bylsma, 2016](#)), even in situations where it might be less desirable to cry, for example, due to specific social norms. Future studies could test whether individuals who are more prone to crying in any situation (whether socially desirable or not) are more likely to engage in prosocial behavior.

At the same time, crying proneness might not offer a strong level of explanatory value beyond empathy when it comes to prosocial behavior. Future studies would need to investigate this relationship more systematically, especially on a state level. It is also possible that crying proneness represents a specific aspect of the empathy construct (or a specific part of emotional expressivity). Nevertheless, based on our studies, crying proneness can be considered a more important predictor for moral judgments than empathy, suggesting that it might go beyond empathy (and other related constructs).

We further explored how emotional crying is related to different moral domains. Across Studies 5 and 6, we observed the strongest and most consistent association with the care/harm domain of the moral foundations ([Graham et al., 2011](#)). This is not entirely surprising as this foundation focuses on caring for one's kin or others in need. Emotional crying is perceived as a consistent signal of communicating such needs ([Zickfeld et al., 2021](#)) and often occurs in situations focusing on values of care or kinship ([Vingerhoets, 2013](#)). Nevertheless, we observed positive correlations with all five moral foundations, suggesting that emotional crying might play an essential role in each of these. Indeed, emotional crying might occur when experiencing emotions linked to the different foundations such as compassion (care/harm), gratitude (fairness/cheating), pride (loyalty/betrayal), respect (authority/subversion), or elevation (sanctity/degradation; [Vingerhoets, 2013](#); [Zickfeld et al., 2020](#)). Future studies would need to explore these relationships more systematically, considering that the validity of the moral foundations questionnaire has recently been put into question (e.g., [Harper & Rhodes, 2021](#); [Iurino & Saucier, 2020](#)).

Our findings provide some initial evidence that tear-prone individuals are not only evaluated as morally upright but that having a lower crying threshold might indeed be related to stronger moral evaluations and behavior. Importantly, our findings are correlational and thus do not allow for any causal claims. A general proneness to cry might influence moral behavior, but frequent moral behavior might also result in being more prone to cry, especially in situations revolving around moral issues. Alternatively,

a third variable acting as a mediator, confounder, or collider might also explain the relationship. Future studies could experimentally manipulate emotional crying in individuals and assess moral evaluations and behavior afterward. It would be interesting to decipher further whether emotional crying is related to moral judgments and behavior primarily because it often occurs in response to moral emotions such as *elevation* or *gratitude* or because it represents a moral signal on its own without the involvement of specific moral emotions. Such a study would also evaluate the theory that emotional crying can signal engagement in prosocial behavior (Murube et al., 1999). Previous studies have supported the idea that perceiving emotional tears can result in social support intentions toward the crier (Zickfeld et al., 2021). Still, there is less direct evidence that the social signal of crying extends to support behavior by the crier.

Considering specific types of crying and tears, we did not observe any substantial differences across studies. These findings seem counterintuitive as one would expect the most robust associations for positive crying and moral or sentimental tears – aspects that highly focus on moral themes. This could signify that emotional crying per se is associated with moral judgments and behavior regardless of its valence or situation. Such an explanation would point to a more general relationship. Along these lines, Vingerhoets and Bylsma (2016) argue that emotional tears may function as exclamation marks highlighting that the current situation is of high importance, not only for the crier but also for society. Notably, the main findings and the identified relationships relate only to adult crying as moral judgments and behavior are typically considered not fully developed in children (Kohlberg & Hersh, 1977). A key might be the distinction between (vocal) emotional crying and merely emotional tears, the latter of which occurs most frequently in adulthood (Vingerhoets, 2013). Future studies could directly test whether vocal features of crying or mainly visual elements such as tears are related to moral judgments and behavior.

Limitations

We observed that findings showed heterogeneity across studies, which could be related to different measurements, samples, or cultural differences. Most notably, findings for the Indian sample in Study 3 were weaker than in Study 1 and 2. This could be attributed to a different focus of the prosocial behavior measure (focusing on frequency rather than on general tendency) or to actual cultural differences. Cultural factors might impact certain moral judgments and therefore differ across different countries or regions (Shweder, 1991; Turiel, 2002). A more profound test would target the relationship between crying proneness and moral judgments and behavior across more than the three studied countries in the current project to determine the generalizability of the present results. For now, the current findings do not permit us to draw systematic conclusions concerning the cross-cultural level.

Heterogeneity across the study might also be attributed to differences in data quality. Most notably, we excluded a more substantial number of participants in Studies 1–3 and 5 compared to Studies 4 and 6. This might not be surprising as Studies 1–3 and 5 did not offer financial compensation, while this was the case for Study 4 and 6, thereby providing incentives to complete the questionnaires. The high exclusion rate presents another limitation in Study 1–2 and 5, which did not randomize the order of the additional measures. However, we applied a conservative exclusion rate to retain participants who completed close to all items only. Nevertheless, the strength of the present studies lies in evaluating the association between crying proneness and moral judgments and behavior across different populations that extend beyond undergraduates and measures, including self-report ratings and assessments of actual behavior.

Conclusion

The current project provides some initial evidence that emotional crying is modestly associated with evaluations of moral uprightness and that people who cry more easily show stronger disapproval of moral transgressions and tend to be more willing to display prosocial behavior. Crying, or more specifically, emotional tears, might act as an *exclamation mark* (Vingerhoets & Bylsma, 2016) highlighting the significance of certain situations or values beyond the individual. Future studies are needed to investigate this effect's causal pathways, but it seems that there might be something to the old notion that only *good* people cry.

Funding: The authors have no funding to report.

Acknowledgments: We thank Nancy Hoevenaar for her help in conducting Study 1–2.

Competing Interests: The authors have declared that no competing interests exist.

Author Contributions: *Janis H. Zickfeld*—Design planning | Data analysis | Data collection | Writing. *Shanmukh Kamble*—Data collection | Feedback, revisions. *Romy Oostelbos*—Data collection | Feedback, revisions. *Ad Vingerhoets*—Idea, conceptualization | Design planning | Data collection | Writing | Feedback, revisions.

Ethics Statement: All studies were approved by the Ethics Review Board of the School of Social and Behavioral Sciences, Tilburg University.

Data Availability: For this article, data is freely available (Zickfeld et al., 2020).

Supplementary Materials

For this article, the following Supplementary Materials are available (for access see [Index of Supplementary Materials](#) below):

- Project depository including data, syntaxes, and materials
- Supplementary Analyses, Figures & Tables
- Preregistration Study 4
- Preregistration Study 6

Index of Supplementary Materials

- Zickfeld, J. H., Kamble, S., & Vingerhoets, A. (2020). *Supplementary materials to "Only the good cry: Investigating the relationship between crying proneness and moral judgments and behavior"* [Data, syntax, registrations, and material]. OSF. <https://osf.io/g5sxf/>
- Zickfeld, J. H., Kamble, S., & Vingerhoets, A. (2021). *Supplementary materials to "Only the good cry: Investigating the relationship between crying proneness and moral judgments and behavior"* [Analyses, figures, tables]. OSF. <https://osf.io/dktjn/>
- Zickfeld, J. H. (2020, December 2). *Supplementary materials to "Only the good cry: Investigating the relationship between crying proneness and moral judgments and behavior"* [Preregistration Study 4]. OSF. <https://doi.org/10.17605/osf.io/e5rzk>
- Zickfeld, J. H. (2022, April 21). *Supplementary materials to "Only the good cry: Investigating the relationship between crying proneness and moral judgments and behavior"* [Preregistration Study 6]. OSF. <https://doi.org/10.17605/osf.io/x85gn>

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