

Research Article

# Does voluntary disclosure matter when nonprofit organizations violate stakeholder trust?

Jurgen Willems\*, Lewis Faulk†

**Abstract:** The reputations of nonprofit organizations can be damaged as a result of an organizational scandal, as demonstrated by recent examples of international nonprofit and non-governmental organizations. Common practice and findings from studies using administrative data suggest that nonprofits can reduce the negative effects of scandals by voluntarily disclosing information about the event to stakeholders. This study tests those assumptions in an experimental framework and finds that organizations' voluntary disclosure of a scandal does not effectively mitigate negative donation intentions following the crisis.

**Keywords:** Voluntary disclosure, Crisis, Reputation, Nonprofit, Stakeholders

**Supplements:** [Open data](#), [Open materials](#)

Recent examples of high profile scandals, such as the Red Cross's mismanagement of donor resources for the 2010 Haiti earthquake and sexual misconduct among Oxfam International's earthquake response staff, highlight the relevance of reputation management for nonprofit organizations. Current empirical evidence suggests significant detrimental impacts of fraudulent activities by nonprofit organizations, with fraud exposure leading to reduced charitable giving and greater likelihood of organizational failure (Archambeault & Webber, 2018; McDonnell & Rutherford, 2018).

Common practice suggests that managers may reduce the negative impacts of scandals by voluntarily disclosing information about what took place. In doing so, they signal that they are aware of the situation, which is a necessary condition to be able to take countermeasures (Arpan & Roskos-Ewoldsen, 2005). Harris, Petrovits & Yetman (2018) test this assumption using administrative data from organizations' financial reports and find that organizations suffer

weaker negative financial impacts when they voluntarily disclose information of fraud events in their annual reporting. However, this evidence relies on information within self-reported tax returns from organizations and assumes both that individual donors are aware of organizations' fraud and voluntary disclosures, and that aggregate financial changes result from donor responses rather than other possible explanations, such as internal staffing disruptions. Other studies overcome these issues by directly observing individuals' behavior when they are given information about organizational crisis situations and organizations' responses (Grimmelikhuijsen, Vries & Zijlstra, 2019).

Recognizing the limitations of administrative data in Harris et al., (2018) and the differences between nonprofit organizational stakeholder relationships and those of public agencies that were targeted by Grimmelikhuijsen, Vries & Zijlstra (2019), this study contributes to the literature by testing those prior findings in a controlled experiment specifically in a nonprofit context. Our research question asks whether nonprofit organizations' voluntary disclosure of fraud can effectively repair stakeholder trust and prevent significant declines in donations. To answer this research question, we conducted three experiments ( $n_1 = 298$ ,  $n_2 = 214$ ,  $n_3 = 2,371$ ) testing donation responses when individuals receive information on an organizational fraud taking place and

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whether the organization voluntarily disclosed the fraud. We further build on past studies by recognizing that it is impossible for organizations to immediately inform all potential stakeholders after a crisis and that many stakeholders will find out about the event from other sources, such as news reports. Moreover, interested stakeholders will likely be informed or inform themselves through various channels that each might have a particular effect on the overall stakeholders' perceptions and trust in the organization (Bryce, 2007, Willems, Jegers, & Faulk, 2016). Therefore, we compare voluntary disclosure to situations where no information on disclosure was given, and to when the fraud was reported in the news. In contrast to prior literature, findings from the three experiments suggest that voluntary disclosure has little, if any, effect on donor intent, especially when the overall negative impact of the crisis itself is taken into account.

### **Theoretical Background and Main Hypothesis**

Pressure from performance-based funding from government and foundations, the growth of social media, and the 24-hour news cycle have increasingly shifted nonprofit organizations' attention to reputation management, crisis resistance, and recovery (Szper & Prakash, 2011; Tremblay-Boire & Prakash, 2015; Willems, 2016). The smallest error or even an unverified negative rumor can quickly spread and damage the reputation of an organization, which in turn can substantially reduce support from various stakeholders (Forbes, 1998; Radbournes, 2003; Sarstedt & Schloderer, 2010).

From theoretical perspectives, there are high levels of information asymmetry in nonprofit work and therefore a strong reliance on reputations and perceived legitimacy to develop the trust of donors or other principal stakeholders who support the organization's work (Hansmann, 1980; Herman & Renz, 2008; Krashinsky, 1986).<sup>1</sup> Trust is fragile, however, and may be easily broken and donation commitments ended when agents within the organization engage in actions that run counter to donor expectations (Bryce 2007, Gaskin 1999; Lount, Zhong, Sivanathan, & Mur-nighan, (2008), 2008; Vantilborgh, Bidee, Pepermans, Willems, Huybrechts, & Jegers, 2011, Vantilborgh, Bidee, Pepermans, Willems, Huybrechts, & Jegers, 2014). Such breaches of trust most commonly include criminal activity by managers, agents, or board members of the organization and

the financial mismanagement of donor funds, including the misappropriation of assets and fraud (Freemont-Smith, 2004; Harris et al., 2018).

The question becomes what, if anything, the organizations' managers or leaders can do to repair stakeholder trust and sustain the organization, and its mission-related work, after fraud takes place. Willems (2016) shows that nonprofit leaders associate the ability to recover from a crisis with informing stakeholders on one hand and demonstrating the ability to continuously improve internal organizational processes on the other. One key element of this practice is organizations' voluntary disclosure as a way to signal to stakeholders that the organizational leadership acknowledges the situation and is willing to actively re-evaluate its own way of working to avoid similar situations in the future (Arpan & Roskos-Ewoldsen, 2005).

Hence, from theoretical and practical perspectives, voluntary disclosure can be considered part of a trust repair process that is based on forgiveness (Srivastava & Chakravarti, 2009, Xie & Peng, 2009). This forgiveness may also counteract the initial and/or dominant negative effect of a trust breach (Chung & Beverland, 2006). This is particularly relevant in the context of social goal achievement and nonprofit organizations, where more flexible relationships likely exist between an organization and a stakeholder, at least compared with traditional business–customer relationships (Arnett et al., 2003). For example, stakeholder relationships with nonprofit organizations depend more heavily on personal values, trust, and ideology, than on transactional economic exchange value (Dailey, 1986; De Cooman, De Gieter, Pepermans, & Jegers, 2011; Mishina, Block, & Mannor, 2012; Vantilborgh et al., 2014). This has the consequence that nonprofit stakeholders tend to engage with organizations in part through deeply seeded emotional connections, which may lead an organization's stakeholders to be more willing to forgive the organization (Finkel, Rusbult, Kumashiro, & Hannon, 2002; Xie & Peng, 2009). However, this greater ideological and emotional involvement may also cause breaches of trust to result in potentially stronger and more permanent negative reactions.

In sum, given the trust repair and forgiveness mechanisms that might be induced among nonprofit stakeholders as a result of voluntarily disclosing crisis information, the literature suggests that the negative effect of a crisis situation will be mitigated by explicit information about the organization voluntarily disclosing this information.

*Hypothesis 1: Explicit information about voluntary disclosure of fraud by a nonprofit organization is expected to mitigate the overall negative effect of the fraud on stakeholder donation intentions.*

## Method<sup>2</sup>

This study uses three online experiments to answer our research question. An experimental design allows us to identify individual behavioral responses to more precisely test the potential effect of voluntary disclosure compared to a situation in which no information is given about the disclosure strategy, and compared to a situation in which another form of disclosure took place (e.g. by a third party, such as a news story). This enables us to single out the negative effect of a crisis on one hand, and the potential mitigating effect of voluntary disclosure on the other. In addition, this approach provides clear benefits compared to analyzing real-life crisis situations, in which information may reach potential stakeholders through multiple channels that cannot be controlled for.

We used three experiments to sequentially refine our approach and account for potential alternative explanations. Experiment 1 was developed as a first test of the overall hypothesis ( $n = 298$ ). In Experiment 2 ( $n = 214$ ) we used the same design but altered the crisis description to test the extent to which findings in Experiment 1 were potentially related to the specific crisis description that we used. For the design of Experiment 3, we used the preliminary results of the first two experiments to conduct a larger replication ( $n = 2,371$ ) of both. Moreover, Experiments 1 and 2 allowed us to estimate the actual negative effects of both crisis scenarios. This information allowed us to conduct a power analysis to estimate how large our sample would need to be in Experiment 3 to identify significant mitigating effects at varying effect sizes.

Below, we first discuss Experiment 1, and subsequently point out - for reasons of conciseness - where Experiments 2 and 3 differed and complemented the previous experiment(s).

### *Experiment 1: Design*

Respondents were given a description of a fictitious organization (named EarthLove), and were subsequently asked how much they would donate to the organization.<sup>3</sup> We asked each participant to imagine that they had made a donation of \$100 to the organization in the prior year in order to create a sense of

a stakeholder relationship with the organization and to establish a common psychological anchor for all respondents. We then asked respondents to indicate a donation amount for this year in an open text box. See the Appendix for a more detailed description of the vignettes and dependent variable for all three experiments.

Respondents were randomly assigned to one of five groups. In Group 1, only a basic description was given about the organization EarthLove without any information about organizational fraud or disclosure. In Group 2, respondents were given the same organizational description as Group 1, followed by information about a fraud event taking place in the organization. Hence, comparing Groups 1 and 2 gives us an indication of the negative effect of the crisis in itself, regardless the type of disclosure that took place. We use this effect size as a benchmark to test the behavioral effect of voluntary disclosure.

Groups 3, 4 and 5 are used to test our study hypothesis. Vignettes for these groups differed from Group 2 by adding information on how the organizational fraud was disclosed. In Group 3, the fraud was voluntarily disclosed by the organization. In Group 4, the fraud was disclosed by a third party (a newspaper), and in Group 5 by both.<sup>4</sup>

We expect a negative difference in donations between Groups 1 and 2, which would confirm that our fraud description indeed induces a negative effect on stakeholder supporting intentions. This negative effect is a condition for face validity of our experiment, as we start from the literature-based assumption that a crisis has a negative effect on donation behavior (Archambeault & Webber 2018; Harris, Petrovits & Yetman, 2018). Following our hypothesis, we expect a significantly greater average donation amount for the groups in which voluntary disclosure is explicitly mentioned (Groups 3 and 5), compared to Group 2, where disclosure is not mentioned, and to Group 4 where a placebo alternative disclosure scenario is given (Simmons et al., 2011; Boot et al., 2013; Woodside, 2016).

We tested differences in group averages with a Kruskal-Wallis rank sum test, followed by Dunn's group comparisons. These tests are appropriate for a multi-group comparison of a variable with a non-normal distribution (We refer to the Online Appendix for a detailed description of the distribution of the dependent variable for all three experiments).

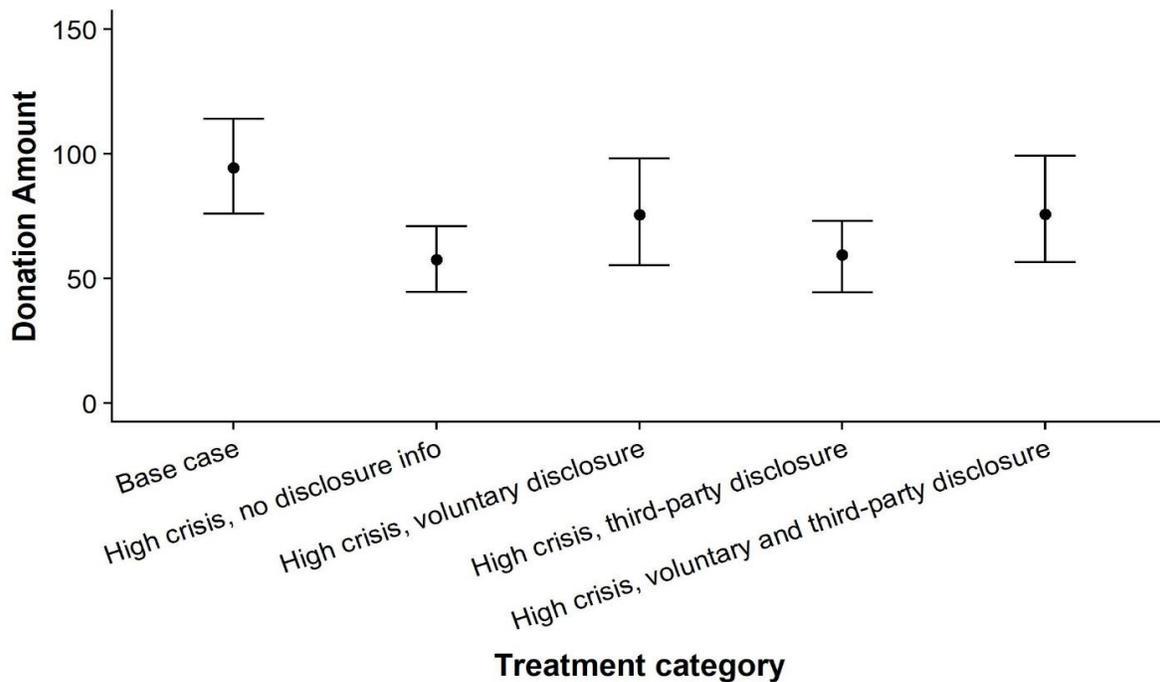
All analyses were performed with R (R Core Team 2018), and special use of R-packages 'ggplot2' (Wickham 2009), 'pwr' (Champerly 2018), 'dunn.test'

**Table 1**  
**Descriptive Statistics for Experiment 1**

	N/n <sup>a</sup>	mean: donation amount	s.d.	min	max	percentiles		
						25%	50%	75%
<b>All</b>	298	72.36	71.41	0	500			
Base case	58	94.41	76.85	0	500	57.5	100	100
High crisis, no disclosure info	61	57.51	50.11	0	200	0	50	100
High crisis, voluntary disclosure	60	75.52	85.33	0	500	0	100	100
High crisis, third-party disclosure	60	59.45	54.34	0	200	0.75	50	100
High crisis, vol. and third-party disclosure	59	75.93	79.91	0	500	0	100	100

<sup>a</sup> Two outliers were removed (donation amounts of 1000 and 3000), but findings did not differ with or without these outliers. These outliers were possible as we allowed people to type in an actual amount they would be willing to donate. Given the setting of this experiment we assume these were typos, or intentional unrealistic and counter-productive behavior of respondents.

**Figure 1**  
**Group means and Bootstrapped 95%-Confidence Intervals for Experiment 1**  
**(donation amount)**



**Table 2**  
**Kruskal-Wallis and Dunn's Multiple Comparison Tests for Experiment 1**

<b>Kruskal-Wallis Tests</b>			
All 5 groups		$\chi^2 = 12.662$ , $df = 4$ , $p = 0.0107$ *	
The 4 groups with crisis information		$\chi^2 = 2.0855$ , $df = 3$ , $p = 0.5549$	

<b>Dunn's Multiple Comparison Tests</b>				
		$\bar{z}$	$p$	
1	Base case (Group 1) - High crisis, no disclosure info (Group 2)	3.184	0.001	*
2	Base case (Group 1) - High crisis, voluntary disclosure (Group 3)	2.131	0.017	*
3	Base case (Group 1) - High crisis, third-party disclosure (Group 4)	2.983	0.001	*
4	Base case (Group 1) - High crisis, vol. and third-party discl. (Group 5)	1.952	0.025	*
5	High crisis, no disclosure info - High crisis, voluntary disclosure	-1.054	0.146	
6	High crisis, no disclosure info - High crisis, third-party disclosure	-0.191	0.424	
7	High crisis, no disclosure info - High crisis, voluntary and third-party disclosure	-1.221	0.111	
8	High crisis, third-party disclosure - High crisis, voluntary disclosure	-0.860	0.195	
9	High crisis, third-party disclosure - High crisis, voluntary and third-party disclosure	-1.027	0.152	
10	High crisis, voluntary and third-party disclosure - High crisis, voluntary disclosure	0.171	0.432	

\*  $p < 0.05$

(Dinno, 2017), 'Scale' (Giallousis 2015), and 'rworldmap' (South 2011).

#### *Sample*

Respondents for all three experiments were US adults (18 years or older), who were addressed through a professional panel service (Qualtrics panels) in Experiments 1 and 2, and through Amazon Mechanical Turk (MTurk) in Experiment 3. Respondents were rewarded for their participation with coupons for online services in the Qualtrics panels and through MTurk payment in Experiment 3, based on an approximate pay-rate of \$9.50 per hour.<sup>5</sup> Several attention questions were included in each survey, and respondents who failed to answer these questions correctly were not incorporated in the final sample.

For Experiment 1, this resulted in a sample of 300 participants (63.67% female, and the average age was 44.43;  $sd = 14.1$ ). We deleted two extreme outliers for the analysis reported here, but as we used rank-sum tests, results are not different with or without these outliers. While the respondents are geographically and demographically diverse, the samples are not random probability samples of the US population. Descriptive statistics for donation amount are

given in Table 1. In Figure 1, the group means are plotted, along with confidence intervals based on 1,000 bootstrap runs.<sup>6</sup>

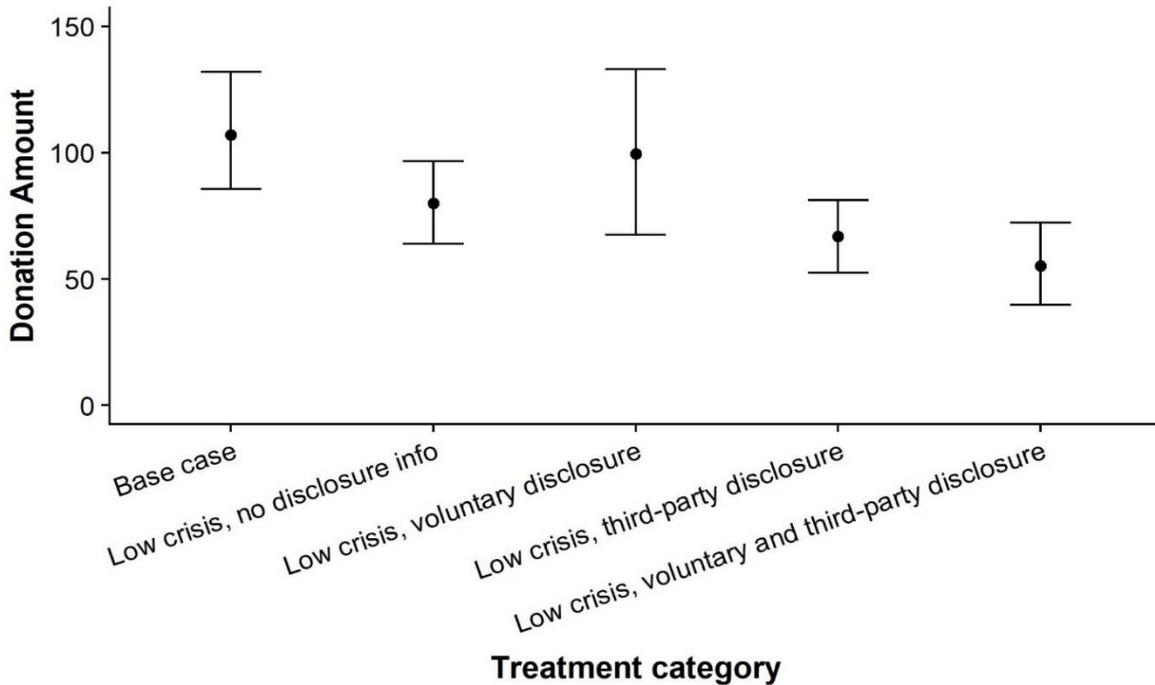
#### *Results*

When comparing all five groups, there is at least one significant difference between the groups. From the Dunn's multiple comparisons in Table 2, it is shown that this difference is between Group 1 (no crisis information) and the groups in which a crisis was described (Kruskal-Wallis  $\chi^2 = 12.662$ ,  $df = 4$ ,  $p = 0.01073$ ; Dunn's  $z$  group 1-group 2 = 3.184,  $p = 0.001$ ). The significantly lower donation amount in Group 2, compared to Group 1, indicates that the crisis information indeed resulted in a decline in donations following a crisis event. As shown in the Dunn's comparisons, donations in all groups with fraud events (Groups 2-5) were significantly lower than the base group (Group 1). However, as shown by the statistically insignificant differences between Groups 2-5, we are unable to reject the null hypothesis that a voluntary disclosure strategy does not counteract the negative impact of fraud (Kruskal-Wallis  $\chi^2 = 2.0855$ ,  $df = 3$ ,  $p = 0.5549$ ). Despite the fact that average donation amounts are higher in the groups with voluntary disclosure (Groups 3 and 5),

**Table 3**  
**Descriptive Statistics for Experiment 2**

	N/n <sup>a</sup>	mean: donation amount	s.d.	min	max	percentiles		
						25%	50%	75%
<b>All</b>	214	81.58	76.23	0	500			
Base case	42	106.93	79.46	0	500	100	100	100
Low crisis, no disclosure info	43	79.98	56.03	0	200	40	100	100
Low crisis, voluntary disclosure	43	99.60	111.90	0	500	5	100	115
Low crisis, third-party disclosure	42	66.90	49.11	0	150	0.25	100	100
Low crisis, vol. and third-party disclosure	44	55.34	57.44	0	300	0	50	100

**Figure 2**  
**Group means and Bootstrapped 95%-Confidence Intervals for Experiment 2 (donation amount)**



the differences are not statistically significant when compared to Groups 2 and 4, where the organization did not disclose the fraud. This suggests that an organization’s choice to disclose a crisis event is not expected to significantly lessen the negative response of donors to the event.

*Experiment 2: Design*

The design of Experiment 2 was only different from Experiment 1 with respect to the crisis that occurred. The results of the first experiment indicate that the crisis situation that we used was substantially severe, so that the potential effect of a voluntary disclosure

strategy may have been “overwhelmed” by the severity of the fraud. In other words, when the crisis is highly severe, any small additional variation that is created by a disclosure might be too small to be statistically detectable, or it might be nonexistent or practically irrelevant. Moreover, from a theoretical perspective, a too large violation of earlier experiences might result in an unrepairable trust breach, making any additional actions by the organization unnoticed or irrelevant for the stakeholders (Lange et al. 2011; Lount et al. 2008; Restubog et al. 2008). As a result, we conducted Experiment 2 as a variation of Experiment 1, and used a less severe fraud scenario. In contrast to three board members engaging in fraudulent practices, the case description of Experiment 2 focused on a single employee using organizational resources for his or her own benefit. Hence, the results of Experiment 2 can clarify whether results in Experiment 1 are case dependent.

#### *Sample*

Experiment 2 was fielded in spring 2017 through Qualtrics Panels and yielded 214 respondents (69.16% female, and the average age was 50.11 (sd = 16.35)).<sup>7</sup>

#### *Results*

Table 3 reports the descriptive statistics for the dependent variable (donation amount) across groups, while Figure 2 plots group means and bootstrapped confidence intervals. The Kruskal-Wallis and Dunn’s test statistics are reported in Table 4. Similar to Experiment 1, there is at least one significant difference between the five groups (Kruskal-Wallis  $\chi^2 = 17.495$ ,  $df = 4$ ,  $p = 0.0015$ ). However, as in Experiment 1, further comparison of the four groups in which a crisis was reported shows no significant differences among the groups where fraud took place (Kruskal-Wallis  $\chi^2 = 7.1275$ ,  $df = 3$ ,  $p = 0.0679$ ).

As a specific test of our hypothesis, donation levels in Group 3 (only voluntary disclosure) are not significantly different than in groups where the voluntary disclosure did not take place. Even more concerning, donation amounts in Group 5 where both the organization and a third party disclosed the crisis simultaneously were found to be significantly lower than in other groups (Table 4, comparison 7: Dunn’s  $z$  group 2-group 5 = 2.165,  $p = 0.0152$ ; Comparison 10: Dunn’s  $z$  group 5-group 3 = -2.583,  $p = 0.0049$ ; Comparison 9: Dunn’s  $z$  group 5-group 4 = 1.314,  $p = 0.0945$ ). Hence, as in Experiment 1, Experiment 2 also does not provide support for the hypothesis that

voluntary disclosure can mitigate the negative effect caused by a crisis. However, as shown in the descriptive statistics, variance in the dependent variable, especially in Group 3 where fraud was voluntarily disclosed, does not allow us to precisely estimate the effects of voluntary disclosure at the sample sizes used in the first two experiments, limiting our confidence in the results. These concerns led us to conduct a larger-N replication in Experiment 3 to more precisely estimate these effects.

#### *Experiment 3: Design*

To test the findings of Experiment 1 and Experiment 2 with more precise estimates and greater confidence, we replicated the first two experiments in Experiment 3 with a larger sample size. The designs of Experiment 1 and 2 were combined, resulting in nine experimental groups. Group 1 again focused on the general description of the organization. Groups 2 to 5 were identical to groups 2 to 5 in Experiment 2 (less severe crisis; ‘low crisis’), and groups 6 to 9 were identical to Groups 2 to 5 in Experiment 1 (severe crisis; ‘high crisis’). We used the same dependent variable as Experiments 1 and 2 and added an open response field in which we asked respondents to give a short written explanation for their decision. We used this to verify that answers were not provided by a robot (Dreyfuss, 2018) in addition to manipulation checks and questions to allow sensitivity and robustness testing.<sup>8</sup> As an additional complement to our original experiments, Experiment 3 added an extra 4-item survey construct of organizational trust (Tax et al., 1998). This was included to evaluate the extent that trust breaches and trust repair strategies affect stakeholder perceptions beyond their behavioral donation response. By adding this complementary measure, we can thus verify our theoretical reasoning based on trust breach and trust repair. Cronbach’s alpha in this study for the four items is 0.878.

#### *Sample*

We used a power analysis based on statistics from Experiments 1 and 2 to select our target sample size in Experiment 3, and to be able to detect practically significant effects from voluntary disclosure for both severe (Experiment 1) and less severe fraud (Experiment 2). This power analysis is reported in detail in the Online Appendix. Based on the power analysis, we targeted 250 respondents per cell in Experiment 3. At that sample size, even if voluntary disclosure does not fully mitigate negative stakeholder effects of organizational fraud events, as expected from the first two experiments, we would still be able to iden

**Table 4**  
**Kruskal-Wallis and Dunn's Multiple Comparison Tests for Experiment 2**

<b>Kruskal-Wallis Tests</b>				
All 5 groups		$\chi^2 = 17.495, df = 4, p = 0.0015 *$		
The 4 groups with crisis information		$\chi^2 = 7.1275, df = 3, p = 0.0679$		
<b>Dunn's Multiple Comparison Tests</b>				
		$\bar{x}$	$p$	
1	Base case (Group 1) - Low crisis, no disclosure info (Group 2)	1.822	0.034	*
2	Base case (Group 1) - Low crisis, voluntary disclosure (Group 3)	1.408	0.080	
3	Base case (Group 1) - Low crisis, third-party disclosure (Group 4)	2.640	0.004	*
4	Base case (Group 1) - Low crisis, vol. and third-party discl. (Group 5)	3.984	0.000	*
5	Low crisis, no disclosure info - Low crisis, voluntary disclosure	-0.416	0.339	
6	Low crisis, no disclosure info - Low crisis, third-party disclosure	0.833	0.202	
7	Low crisis, no disclosure info - Low crisis, voluntary and third-party disclosure	2.165	0.015	*
8	Low crisis, third-party disclosure - Low crisis, voluntary disclosure	-1.247	0.106	
9	Low crisis, third-party disclosure - Low crisis, voluntary and third-party disclosure	1.314	0.094	
10	Low crisis, voluntary and third-party disclosure - Low crisis, voluntary disclosure	-2.583	0.005	*

\*  $p < 0.05$

tify effects that reduced the expected donation damage by at least 25 percent for large donation damage from severe fraud (e.g., reducing the estimated \$40 loss per respondent (See Table 1, Group 2) by at least \$10 to only a \$30 loss or less per respondent) and by at least 40 percent for less severe fraud (e.g., reducing average donation loss by at least \$8 from the estimated \$20 overall loss per respondent as a result of the crisis; See Table 3, Group 2). While smaller mediating effects cannot be precisely estimated at this sample size, it still allows a fairly wide range of practically significant effects to be detected.

Respondents were addressed in fall 2018 through Mechanical Turk (MTurk) and were rewarded 0.75 USD. From the 3,000 responses, we dropped 256 based on completely senseless written comments justifying their donation amount, and/or when (these) responses came for IP-addresses that occurred multiple times in our dataset (IP-addresses were provided through the Qualtrics survey system). We assume that these responses were given by MTurk bots (Dreyfuss 2018) and/or single persons with multiple MTurk accounts. In addition, we dropped 373 responses based on the fact that the basic memory check question was not answered correctly. However, our findings did not differ with or

without these drop-outs. For the remaining 2,371 respondents, 52.97% are female, and the average age was 37.58 (sd = 11.64).

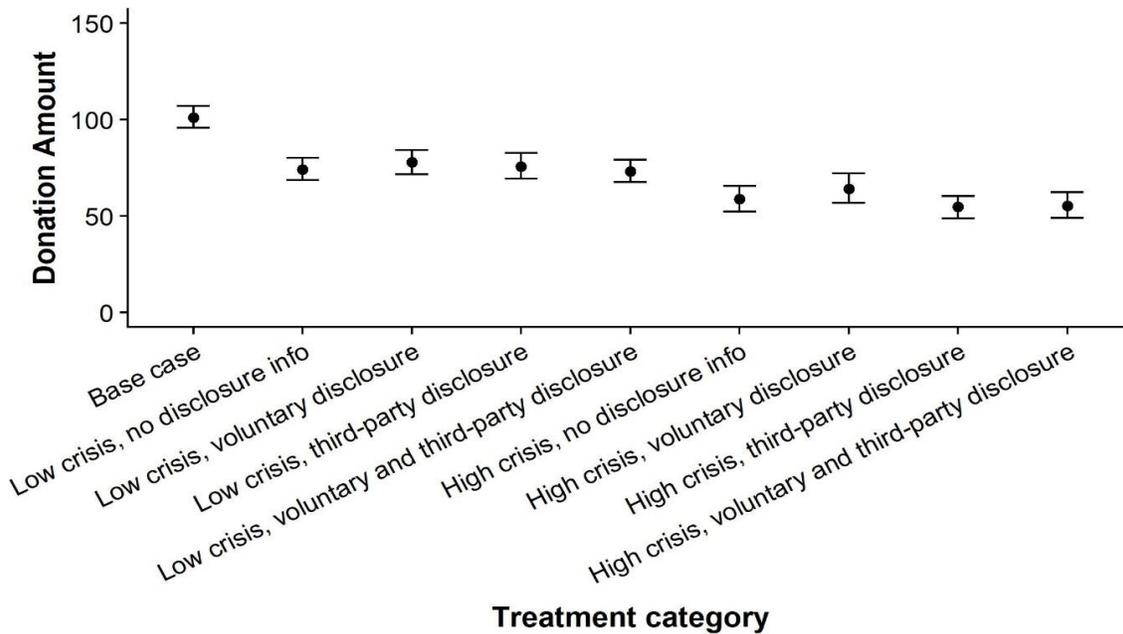
#### *Results*

Table 5 and Figure 3 report the descriptive statistics for the nine experimental groups.<sup>9</sup> Table 6 reports the Kruskal-Wallis Tests and Dunn's comparisons for the less severe and for the more severe crisis situations. Overall, this replication supports our earlier findings with much greater precision. Experiment 3 provides greater confidence that the behavioral effect of voluntary disclosure is rather small or non-existent, and that information on fraud taking place indeed has a significant negative impact, regardless of the disclosure source. We provide additional methodological discussion and further discussion of our full analytical steps in the Online Appendix. One particular group comparison suggests that a slight difference might exist between high crisis situations with third-party disclosure versus voluntary disclosure (Table 6, High Crisis Situation, Comparison 8,  $Z = -1.817, p = 0.035$ ). There is low confidence in this one effect given that the overall Kruskal-Wallis test for the four groups with high crisis information is not significant ( $\chi^2 = 4.4179, df = 3, p\text{-value} = 0.2197$ ). Therefore,

**Table 5**  
**Descriptive Statistics for Experiment 3**

	N/n <sup>a</sup>	mean: donation amount	s.d.	min	max	percentiles		
						25%	50%	75%
<b>All</b>	2371	71.10	54.25	0	500			
Base case	273	101.50	46.85	0	300	100	100	100
Low crisis, no disclosure info	275	74.28	48.67	0	300	50	100	100
Low crisis, voluntary disclosure	274	77.98	52.18	0	500	50	100	100
Low crisis, third-party disclosure	272	75.72	54.73	0	500	43.75	100	100
Low crisis, vol. and third-party disclosure	267	73.35	49.17	0	300	50	100	100
High crisis, no disclosure info	236	58.88	49.13	0	200	0	50	100
High crisis, voluntary disclosure	257	64.21	62.96	0	500	0	50	100
High crisis, third-party disclosure	255	54.82	51.31	0	300	0	50	100
High crisis, vol. and third-party disclosure	262	55.42	56.22	0	500	0	50	100

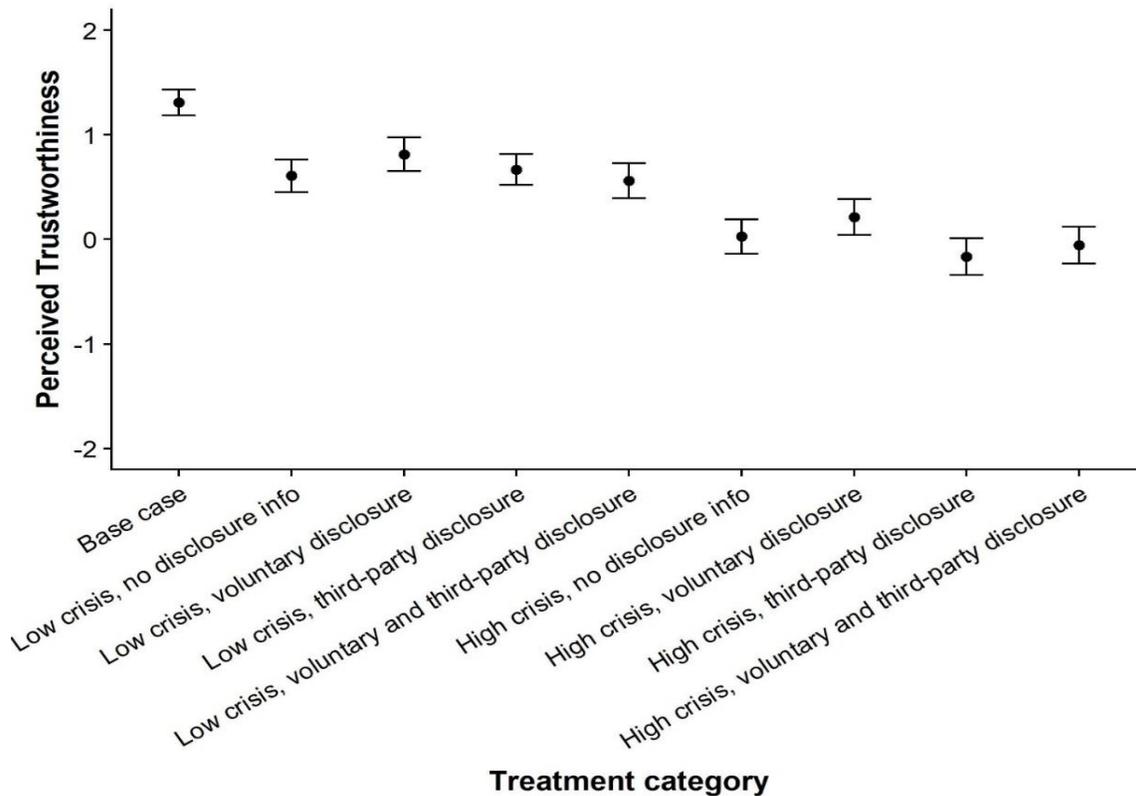
**Figure 3**  
**Group means and Bootstrapped 95%-Confidence Intervals for Experiment 3**  
**(donation amount)**



**Table 6**  
**Kruskal-Wallis and Dunn's Multiple Comparison Tests of Donation Amount**

<b>Low Crisis Situation</b>			
<b>Kruskal-Wallis Tests</b>			
All 5 groups		$\chi^2 = 81.66$ , df = 4, p-value < 0.001 *	
The 4 groups with crisis information		$\chi^2 = 1.6459$ , df = 3, p-value = 0.649	
<b>Dunn's Multiple Comparison Tests</b>			
		$\bar{x}$	$p$
1	Base case - Low crisis, no disclosure info	7.334	0.000 *
2	Base case - Low crisis, voluntary disclosure	6.399	0.000 *
3	Base case - Low crisis, third-party disclosure	6.993	0.000 *
4	Base case - Low crisis, voluntary and third-party disclosure	7.560	0.000 *
5	Low crisis, no disclosure info - Low crisis, voluntary disclosure	-0.929	0.176
6	Low crisis, no disclosure info - Low crisis, third-party disclosure	-0.321	0.374
7	Low crisis, no disclosure info - Low crisis, voluntary and third-party disclosure	0.281	0.389
8	Low crisis, third-party disclosure - Low crisis, voluntary disclosure	-0.606	0.272
9	Low crisis, third-party disclosure - Low crisis, voluntary and third-party disclosure	0.599	0.275
10	Low crisis, voluntary and third-party disclosure - Low crisis, voluntary disclosure	-1.203	0.114
* $p < 0.05$			
<b>High Crisis Situation</b>			
<b>Kruskal-Wallis Tests</b>			
All 5 groups		$\chi^2 = 81.66$ , df = 4, p-value < 0.001 *	
The 4 groups with crisis information		$\chi^2 = 1.6459$ , df = 3, p-value = 0.649	
<b>Dunn's Multiple Comparison Tests</b>			
		$\bar{x}$	$p$
1	Base case - High crisis, no disclosure info	9.500	0.000 *
2	Base case - High crisis, voluntary disclosure	9.040	0.000 *
3	Base case - High crisis, third-party disclosure	10.866	0.000 *
4	Base case - High crisis, voluntary and third-party disclosure	10.743	0.000 *
5	High crisis, no disclosure info - High crisis, voluntary disclosure	-0.651	0.257
6	High crisis, no disclosure info - High crisis, third-party disclosure	1.128	0.130
7	High crisis, no disclosure info - High crisis, voluntary and third-party disclosure	0.944	0.173
8	High crisis, third-party disclosure - High crisis, voluntary disclosure	-1.817	0.035 *
9	High crisis, third-party disclosure - High crisis, voluntary and third-party disclosure	-0.196	0.422
10	High crisis, voluntary and third-party disclosure - High crisis, voluntary disclosure	-1.634	0.051
* $p < 0.05$			

**Figure 4**  
**Group means and 95%-Confidence Intervals for Experiment 3**  
**(perceived trustworthiness)**



we are reluctant to suggest that our hypothesis can be confidently supported by this one effect. However, this finding, which is complemented by slight differences in donation patterns between these groups (e.g. Figure 3 or Figure 8 in the Online Appendix), suggests that future research on potential, but small nuances of voluntary disclosure effects in high crisis situations could be interesting and fruitful.

In additional analysis, the effects of fraud and disclosure type showed a similar pattern for the complementary measure of trust. Figure 4 shows a plot of the group means and 95% confidence intervals for trust in the organization (which respondents indicated after reading the vignette and answering the donation amount question). When comparing (ANOVA) the four vignettes for the less severe crisis situation, no significant difference is found ( $F = 1.839$ ,  $p = 0.138$ ,  $n = 1,088$ ), which is consistent with the Kruskal-Wallis tests for donation amount. However, there is a significant difference when comparing the four vignettes for the high crisis situation ( $F = 3.345$ ,  $p = 0.0186$ ,  $n = 1,010$ ). This complementary

analysis provides additional support for future research focused on high crisis situations. Despite finding a lack of a substantial effect of voluntary disclosure on immediate donation amounts in either scenario, upfront disclosure might be the beginning of a trust repair mechanism, at least in situations where severe fraud has taken place.

### Discussion and Conclusions

These results do not necessarily contradict, but rather complement earlier findings on voluntary disclosure in public and nonprofit management research. For example, Grimmelikhuijsen et al. (2018) test the impacts on stakeholder trust from reading a press release of a focal organization compared to reading newspaper articles from external sources. As they clarify in their hypothesis development, a press release is not only different with respect to the source of information, it is also different with respect to the wording used and the actual message given. Hence, the source of crisis information, the type of wording,

or both are relevant to influence and maintain stakeholder trust. As Grimmelikhuijsen et al. (2018) find, reading a press release after the actual crisis does not result in a decline in trust the way trust declines after reading a newspaper article on the matter. As we kept the wording of the actual crisis situation constant in our experiments and we did not find an additional effect of source of disclosure, we complement these findings that it is likely the wording and the message used in a press release rather than the source that hold the most power to influence trust repair mechanisms.

Similar to Grimmelikhuijsen et al. (2018), our findings also complement Arpan and Roskos-Ewoldsen's (2005) experiment in the businesses context about whether a "stealing thunder strategy" – which is the upfront communication of a scandal by the focal organization itself, before a third party can report on it – results in higher credibility ratings, perceptions of the crisis as less severe, and greater consumer intent to purchase the product involved in the crisis. As in Arpan and Roskos-Ewoldsen (2005), we kept the content of the message and wording of the actual crisis constant across treatment groups, and subject randomization was also performed between-subjects. We test their results in other contexts and we were not able to replicate their findings in a nonprofit setting.

The differences between our findings and those of prior literature suggest that stakeholder relationships in the nonprofit sector are unique relative to those of other sectors, which leads to additional questions for further research on crisis management in this particular context. Potentially, the highly subjective nature of performance and the high information asymmetries in nonprofit work, in particular, necessitate the incorporation of additional moderators in further studies that can explain which stakeholders are susceptible to reputation repair strategies, and which are not.

Moreover, our findings also complement the broader body of literature on overall practices of transparency and accountability in the nonprofit sector. For instance, greater voluntary accountability practices, transparency, and disclosure of financial and performance data by nonprofits are argued to lead to greater stakeholder trust, reduced information asymmetries, and greater donor commitment (Becker, 2018; Bryce, 2007; Cordery & Baskerville, 2011; Gandía, 2011; Gibelman & Gelman, 2001; Saxton, Kuo & Ho, 2012; Saxton, Neely & Guo, 2014; Treblay-Boire and Prakash 2017). However, as we start

in this study from a crisis situation, the trust dynamics might work in different ways. Only few studies have formally addressed this topic in the context of the nonprofit sector, and as discussed in the introduction, this study adds important experimental evidence to this literature.

### **Limitations**

We used a hypothetical case setting in our experiments. This has on one hand the advantage that our results are potentially less influenced by confounding factors such as prior knowledge and/or experience with the focal organization. However, on the other hand, the hypothetical setting, and especially the hypothetical previous experience with the organization through the information on a prior donation, might have led respondents to answer based on those psychological anchors rather than on their true, unbiased donation behavior. Prior research has suggested that hypothetical responses correlate strongly with true donation behavior (Bekkers & Wiepking, 2011), but we cannot estimate true donation amounts with certainty. Instead, this study's findings should be interpreted based on relative differences in donation behavior, as reflected in our between-group analysis. As a result, this study adds to the overall knowledge on the effects of voluntary disclosure, but the findings should be considered in a broader, and still growing body of literature on this topic.

### **Future Research**

As we interpreted our results as being complementary to existing literature and previous experiments, we inherently identified some potential moderator variables that could be tested more explicitly to extend this research. Further research designs could make a formal distinction between (1) source of information, (2) wording used in the crisis communication, and (3) timing of when particular information is given. More robust longitudinal designs in particular could help in better understanding what information may have an impact and when (e.g. short versus long term impact). Moreover, testing varying effects of similar types of crises for nonprofit, public, and for-profit settings could also elucidate how these different contexts induce different crisis recovery strategies.

## Practical Implication

This study shows that voluntary disclosure (or at least information on voluntary disclosure) cannot be expected to substantively mitigate the near-term negative effects of an organization's actions that lead to a breach in public trust. Indeed, we find that disclosure information has no effect, or at least only such a small effect that it could not be precisely identified based on our sample sizes. We discuss avenues of future research above. However, given the low potential effect of voluntary disclosure (as opposed to stakeholders discovering the crisis through third parties), the main practical implication from our findings is that it remains better to avoid a crisis than to have to repair one.

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## Notes

1. This is in large part due to the specific nature of goods and services produced in nonprofit work, which makes it difficult to directly observe or evaluate performance quality by nonprofit staff, agents, or other actors (Krashinsky, 1986). Information asymmetry in these settings requires trust from donors and other stakeholders to overcome contract and market failure, and support a nonprofit in its work even when work quality cannot be directly observed (Herman & Renz, 2008; Sowa, Selden, & Sandfort, 2004; Willems, Boenigk & Jegers, 2014).
2. This is an Open Science project: Data and research protocol, in R (R Core Team 2018), are publicly available at <https://osf.io/wqzsa/> (Willems & Faulk, 2019). This study is part of a larger project on nonprofit reputation management (for an overview see: Willems & Waldner, 2019).
3. A fictitious organization was chosen to avoid potential confounding factors that we could not control in an experimental setting related to some respondents potentially knowing the organization, having a priori opinions of its work,

and/or already been informed directly or indirectly about a fraud situation.

4. Following Simmons et al. (2011), Boot et al. (2013) and Woodside (2016), Groups 4 and 5 provide placebo descriptions, as contrasts for the voluntary disclosure description. This enables various comparisons with potential scenarios that can happen in real-life cases, and allows us to test the effect of voluntary disclosure both alone and in combination with other public attention that an organizational crisis may receive.
5. The exact value of the reward that each respondent received was a fixed price per respondent for an overall expected survey time, including service fees for the Qualtrics panels and was 0.75 USD for MTurk respondents. The experiment was embedded in another larger data collection, fielded in fall 2016 (Willems & Waldner, 2019), but the experiment section of the survey had no relevance to the other constructs in the questionnaire. Throughout this data collection, attention questions were included, and respondents dropped out immediately when failing the attention questions. Their partial answers were not recorded.
6. Donation amount as dependent variable is not normally distributed. Therefore, we calculated confidence intervals based on bootstrapping (Canty & Ripley, 2017). We applied the 95-percentile criterion, which reports the 2.5 and 97.5 percentiles as lower and upper bounds of the 1,000 generated bootstrap means. We applied this procedure to all three experiments (Figures 1, 2, and 3).
7. Similar to Experiment 1, Experiment 2 was collected as a part of a broader data collection. Throughout this data collection, attention questions were included, and respondents dropped out immediately when failing the attention questions. Their partial answers were not recorded.
8. The questionnaire finished with demographics questions on age and gender, and with two memory check questions, in which we asked respondents to recall the exact formulation of the experimental vignette they were confronted with. The first memory check focused on the overall crisis info, with three options: (1) no info about a crisis, (2) a description of the less severe crisis, and (3) a description of the severe crisis. We considered answering this question correctly as a basic requirement for being included in the sample, as it gives an indication of

whether people read the vignette. In a second question, we asked those who did remember that there was information on a fraud event, for the exact formulation of the disclosure based on four options: (1) No explicit information, (2) explicit information on voluntary disclosure, (3) explicit information on newspaper disclosure, and (4) explicit information about both. This variable informs us about the extent to which this information is accurately remembered. Moreover, it enables us to do an additional sensitivity analysis. We also refer to how we did an

extra sensitivity analysis based on these questions in the Online Appendix.

9. Based on our power analysis, we aimed for at least 250 respondents per cell in order to discover a mitigating effect of at least 20 percent for a severe crisis and at least 40 percent for a less severe crisis. Despite the fact that we applied a normal randomization procedure for allocating respondents to groups (embedded in Qualtrics software) one group had fewer observations ('High crisis, no disclosure info': 236).

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