

# FEAR'S ALTRUISTIC QUANDARY: UNRAVELING PRO-SOCIAL CHOICES

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## Abstract

The Covid-19 pandemic brought with it a tidal wave of fear and anxiety across the globe. As often depicted in movies and media, this created a situation in which people were predicted to act selfishly; however, the record amount of volunteerism during this time is at odds with the prediction. This research was designed to investigate the role of personal fear, collective fear, and empathy in determining individual behavior during a collective emergency. Two online research studies were conducted in which personal fear or collective fear was manipulated, and the desire to act in a prosocial way was measured. Results suggest a complex relationship between fear, empathy, and self-reported prosocial intentions. However, there was no impact on true behavioral measures of prosocial behavior.

**Keywords:** *Fear, prosocial behavior, empathy, collective emergency.*

## 1. Introduction

In the tumultuous spring of 2020, the world's population was caught up in a shared landscape of chaos and uncertainty. An unprecedented and swiftly spreading pandemic ushered in stay-at-home mandates and mask regulations. Many people across the globe lost their jobs, students lost valuable in-person class time, and people went an extended time without seeing friends or family. Given this magnitude of uncertainty and fear, one might naturally anticipate a surge in hostility and aggression; however, 2020 turned out to be a year of volunteerism, and acts of kindness often made headlines.

Previous research aligns with this somewhat counterintuitive observation, suggesting that an increase in prosocial behavior in the face of a crisis is commonplace (Zaki, 2020). For example, people have demonstrated increased prosocial behavior in the face of hurricanes, tornadoes, and even after terrorist attacks (Zaki, 2020). Despite these correlative findings, more research is needed on what drives this effect or how to promote acts of kindness over aggression in emergencies (Drury et al., 2013). The current research was designed to fill this hole in the literature by investigating the role that personal fear, collective fear, and empathy play in a person's decision to behave prosocially.

## 2. Study one

Study 1 was designed to compare the impact of collective fear and personal fear on self-reported prosocial behavior and pandemic-specific prosocial behaviors. One hundred and seventy participants were recruited from Amazon's Mechanical Turk using the Cloud Research Platform to complete this online study (Litman et al., 2017).

Participants were first asked to spend three minutes writing without interruption and to imagine the given scenario in as much detail as possible. Participants were randomly assigned to write about a serious strain of COVID-19 hitting their community (collective fear), the thing they are most afraid of, such as spiders, snakes, or heights (personal fear), or to write about every meal they will have over the next two weeks (control). After writing about the scenario, participants were asked to complete a manipulation check, measures of prosocial behavior (including their likelihood to give to charity), empathy measures, and demographics.

### 2.1. Results

The manipulation check revealed that participants in both the fear conditions (collective and personal) experienced more fear than participants in the control condition,  $F(2, 154) = 10.9, p < .001, \eta^2 = .12$ . Tukey post-hoc tests confirmed our hypothesis in that collective fear ( $M = 2.36, SE = .18$ )

produced significantly more fear than control ( $M = 1.63$ ,  $SE = .18$ ),  $t(154) = 2.87$ ,  $p = .01$ ,  $d = .56$ , 95%  $CI = [.17, .94]$ , as did personal fear ( $M = 2.84$ ,  $SE = .19$ ),  $t(154) = 4.64$ ,  $p < .001$ ,  $d = .92$ , 95%  $CI = [.52, 1.33]$ . There was no difference between the COVID-19 and personal fear conditions.

Participants in the collective fear condition self-reported a higher likelihood to engage in pandemic-specific prosocial behaviors,  $F(2,154) = 3.98$ ,  $p = .02$ ,  $\eta^2 = .05$ . Tukey post-hoc tests revealed a significant difference between collective fear ( $M = 5.44$ ,  $SE = .18$ ) and control ( $M = 4.71$ ,  $SE = .19$ ),  $t(154) = 2.80$ ,  $p = .02$ ,  $d = .54$ , 95%  $CI = [.15, .93]$ . However, there was no difference between collective fear and personal fear or between personal fear and control. Also, contrary to our predictions, there was no significant difference between our experimental groups on anticipated charitable giving or on general prosocial behaviors; however, both were significantly higher than the control group.

Additionally, we examined the relationship between participant-reported fear intensity and pandemic-specific prosocial behaviors as mediated by empathic concern. A series of regression analyses were conducted to test for mediation. The results showed that fear intensity positively predicted pandemic-specific prosocial behaviors ( $B = .25$ ,  $z = 3.32$ ,  $p < .001$ ). Analysis of the indirect effects reveals that empathic concern significantly mediates the relationship between fear intensity and pandemic-specific prosocial behaviors,  $ab = .14$ ,  $z = 2.70$ ,  $p = .007$ , with empathy accounting for 55.5% of the total effect. Fear positively predicts empathic concern ( $B = .16$ ,  $z = 2.78$ ,  $p = .005$ ), and empathic concern positively predicts pandemic-specific prosocial behaviors ( $B = .86$ ,  $z = 11.03$ ,  $p < .001$ ). Despite the mediating role of empathy, fear is still a marginal predictor of pandemic-specific prosocial behaviors ( $B = .11$ ,  $z = 1.93$ ,  $p = .054$ ). These findings suggest a complex relationship between fear, empathy, and pandemic prosocial behaviors, whereby experiencing fear leads people to act more prosocially through increased levels of empathy.

### 3. Study two

Study 2 used the same manipulation used in Study 1 but was strengthened by measuring the actual prosocial behavior (charitable giving) rather than predicted prosocial behavior (desire to give to charity). In study 2, 330 participants were recruited from Amazon's Mechanical Turk using the Cloud Research Platform (Litman et al., 2017).

The writing manipulation from study 1 was reused in study 2, and the same dependent variables were used in the survey. However, in study 2, participants were informed that, in addition to the \$1 payment for completing the study, they would be given an additional bonus of four dollars that they could keep or could donate in part or in whole to one of a list of charities that were provided to them. We included a variety of charities across different domains so that participants could choose one that aligned with their values.

#### 3.1. Results

The manipulation check once again revealed that participants in both the fear conditions (collective and personal) experienced more fear than participants in the control condition,  $F(2, 302) = 47.8$ ,  $p < .001$ ,  $\eta^2 = .24$ . Tukey post hoc tests confirmed our hypothesis in that collective fear condition produced significantly more fear than control ( $M$  difference = 1.17,  $SE = .17$ ),  $p < .001$ ,  $d = .98$ , 95%  $CI = [.69, 1.27]$ , as did personal fear ( $M$  difference = 1.62,  $SE = .17$ ),  $p < .001$ ,  $d = 1.36$ , 95%  $CI = [1.06, 1.66]$ .

The primary dependent variable in study two was the amount of the \$4 bonus donated to charity. However, an overwhelming proportion of our participants chose not to donate to charity, and our data was skewed by this trend ( $M = 86.7$ , Median = 0, skewness = 1.39). Therefore, we transformed this data using the square root function before conducting the planned analysis. Contrary to our predictions, there was no significant effect of fear on charitable giving. Additionally, parallel to Study 1, we had planned to conduct mediation analyses to determine if empathy mediated the relationship between fear and charitable giving. However, the relationship between fear and charitable giving was not significant ( $r = .005$ ,  $p = .94$ ), so we did not conduct further analyses.

### 4. General discussion

In both Studies, the manipulation was successful in that participants self-reported experiencing more fear in both fear conditions compared to the control condition. To further investigate if we were tapping into different types of fear or just fear in general, the written responses were analyzed by independent coders. The coders rated each response for how much it focused on fear for others and how much it focused on fear for self. In both studies, coders found significant differences between conditions,

such that participants in the collective fear condition felt more fear for others, while participants in the personal fear condition wrote more about fear for themselves (all  $p < 0$ ). Suggesting that the manipulation was successful in getting participants to focus on the type of fear intended.

Study one had mixed results, providing some support for the hypothesis that participants experiencing collective fear would be more likely to self-report pro-social behavior. However, this was only consistent across some measures of prosocial behavior. Study two was designed to determine if this inconsistency was, at least in part, due to reported behavior rather than real behavior. As such, participants in Study 2 were given the opportunity to donate any amount of an unexpected bonus to charity at the end of the study. Almost all participants decided to keep the full bonus, although a few commented they would give it to charity on their own, resulting in a floor effect with no difference between any condition.

This finding, or lack thereof, suggests a few possibilities: 1. It is possible that the overall hypothesis is simply off base and experiencing fear, collective or personal, has no impact on prosocial behavior. 2. It is possible that this sample was biased due to economic hardship. We did not collect any measures of economic status, so this possibility cannot directly address this possibility; however, research comparing online samples such as Mturk to in-person samples agree that online samples tend to represent people from lower SES situations (Casler et al., 2011; Walters et al., 2018). It is possible that donating to charity was more of a hardship than anticipated, given the SES of our sample. 3. Participants were given the option to donate the unexpected bonus of \$4 to any of nine non-profit organizations; they were able to decide which organization their funds should support. This amount of choice was selected in an effort to maximize the donations received and to include non-profits that could appeal to all people regardless of political beliefs; this included Planned Parenthood, the Wounded Warrior Project, and the American Humane Society among the list of non-profit organizations. However, it is possible that this amount of choices was overwhelming to participants (Chernev et al., 2015). More research is needed to determine which of these possibilities is the most likely explanation for the lack of significant results.

This research began as a way to understand the ways in which collective emergencies can lead to prosocial rather than antisocial behavior. To understand why some people respond to collective emergencies by helping their neighbors and others respond selfishly, we manipulated the type of fear experienced and how that impacts prosocial intentions and behaviors. Overall, the results of these studies do not fully support the original hypothesis that collective fear would lead to more prosocial behavior than personal fear. However, the results suggest that there are likely different types of fear that have varying impacts on empathy and reactions to a collective emergency.

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