

RESEARCH ARTICLE

Compassionate goals, prosocial emotions, and prosocial behaviours during the COVID-19 pandemic

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Abstract

During the COVID-19 pandemic, it is important for people to engage in prosocial behaviours to support one another. The aim of this research is to answer a key question: in a social crisis, what motivates Americans to help others? Guided by research on appraisal theories and ecosystem theory, we examined the role of compassionate goals and prosocial emotions in promoting prosocial behaviours towards either out-group or in-group members. Study 1 ($N = 943$) was conducted in February 2020, before the widespread transmission of COVID-19 began in the United States. Results show that people with high compassionate goals are more likely to experience sympathy, which in turn makes them more willing to help people suffering from COVID-19 in China. Study 2 ($N = 1,009$) was conducted with a nationally representative sample after COVID-19 became more prevalent in the United States. Although people with high compassionate goals still experience more sympathy and solidarity, sympathy does not predict donation intention. Instead, solidarity mediates the relationship between compassionate goals and donation intention. Please refer to the Supplementary Material section to find this article's Community and Social Impact Statement.

KEYWORDS

compassionate goals, COVID-19, prosocial behaviours, solidarity, sympathy

1 | INTRODUCTION

Prosocial behaviours are voluntary actions intended to benefit other people, which include physical helping, emotional comforting, and financial or social assistance (Penner, Dovidio, Piliavin, & Schroeder, 2005). When faced with the threat of natural disasters or health crises, prosocial behaviours are important because they not only benefit the help recipients, but also the help givers. Indeed, a body of research has shown that engaging in prosocial behaviours is associated with greater happiness and psychological well-being, better interpersonal relationships, and decreased morbidity in medical settings (Dunn, Aknin, & Norton, 2008; Weinstein & Ryan, 2010).

On 11 March 2020, the World Health Organization (WHO) designated 'coronavirus disease 2019' (COVID-19) a global pandemic (World Health Organization, 2020). With the spread of COVID-19, resource shortages were reported around the world (Harney, 2020; McMahon, Peters, Ivers, & Freeman, 2020). Accordingly, Americans have been urged to engage in more prosocial behaviours to save and protect lives (Centers for Disease Control and Prevention, 2020). The aim of this research is to investigate how psychological processes such as compassionate goals and prosocial emotions influence Americans' prosocial behaviours towards out-groups and in-groups during the COVID-19 pandemic.

As much of the research on prosocial behaviours is conducted in times of security and stability (Vardy & Atkinson, 2019), less is known about prosocial behaviours during a global pandemic. Within the limited literature, one line of research argues that disasters reduce cooperation by motivating individuals to prioritize short-term needs over long-term relationships (Nowak & Sigmund, 2005). In contrast, other research suggests that disasters motivate increased prosocial behaviours because witnessing suffering in other people can invoke empathy (Eisenberg, Eggum, & Giunta, 2010). Our study is motivated by these conflicting viewpoints to explore the motivational and emotional predictors of prosocial behaviour.

Importantly, through two studies, we assess Americans' prosocial intentions both before and after the community spread of COVID-19 began in the United States. Given the progression of the pandemic, the target of prosocial behaviours naturally shifted from out-group members (i.e., people in China) to in-group members (i.e., other Americans). According to social identity theory (Tajfel, 1978), individuals often exaggerate the similarities between themselves and their in-group members, which fosters greater sympathy and higher prosocial intentions. In contrast, perceived differences towards out-group members may suppress prosocial intentions (Stürmer & Snyder, 2010). In this research, we examine this distinction and further argue that sympathy may also originate from compassionate goals (Crocker & Canevello, 2008). This relationship is evaluated in both Study 1 and Study 2. Moreover, as COVID-19 became more prevalent in the United States, a sense of solidarity may also influence prosocial behaviours (Páez, Basabe, Ubillos, & González-Castro, 2007; Solnit, 2009), which is additionally investigated in Study 2. Together, our study examines whether prosocial emotions mediate the relationship between compassionate goals and prosocial behaviours both before and after COVID-19 impacted the United States.

2 | COMPASSIONATE GOALS AND PROSOCIAL BEHAVIOURS

Goals are cognitive representations of desired end states that guide individuals' behaviours (Fishbach & Ferguson, 2007). Goals can direct specific actions at the moment, as well as long-term trajectory in life (Fujita & MacGregor, 2012). For example, when people realize that their current behaviour digresses from their goals, they may change their behaviour to better align with their goals (Scheier & Carver, 1988).

Interpersonal goals seek to 'attain, maintain, or avoid a specific end state for the partner or the relationship' (Fitzsimons & Bargh, 2003, p. 150). Individuals' interpersonal goals direct and shape their interactions with others (Crocker & Canevello, 2012). When people have compassionate goals, they desire mutually supportive relationships and promote the well-being of others (Crocker & Canevello, 2008). In other words, people with compassionate goals adopt an *ecosystem* motivational perspective between the self and others (Crocker, Olivier, & Nuer, 2009). They tend

to view their relationships with others as non-zero-sum, such that one's well-being is dependent on others' well-being (Crocker & Canevello, 2015).

Compassionate goals can be both dynamic and static. That is, people's compassionate goals may fluctuate across contexts and over time, as a reflection of their current internal state and situational conditions. People may also differ in their chronic compassionate goals, which entail a sense to support others and regard themselves as a source of others' well-being (Crocker & Canevello, 2012). Our study aligns with the latter viewpoint and conceptualizes compassionate goals as a relatively stable prosocial motivation.

Previous studies suggest that people with higher chronic compassionate goals generally view people as interconnected and care about the well-being of others, regardless of social identities or group membership (Crocker & Canevello, 2008). For example, compassionate goals predict various prosocial orientations such as altruism (Rushton, Chrisjohn, & Fekken, 1981) and source beliefs (i.e., perceiving oneself as the source of others' well-being; Crocker & Canevello, 2012). Specifically, research shows that chronic compassionate goals are a robust predictor of prosocial behaviours to relieve others' suffering, such as donation to the Red Cross (Lim & DeSteno, 2016). In this study, we seek to replicate these findings and hypothesize that:

H1. Individuals with high compassionate goals towards others who are suffering from COVID-19 are more willing to provide aid.

3 | SYMPATHY AND PROSOCIAL BEHAVIOURS

Apart from motivational processes, certain emotions are also important in promoting prosocial behaviours. According to Lazarus (1991), appraisal processes of internal and external conditions lead to emotional responses, which in turn predict adaptive behaviour to either solve a problem or to relieve negative emotions. Importantly, emotions differ systematically based on people's self-construal (Frijda, Kuipers, & ter Schure, 1989). Ego-focused emotions, such as anger, frustration, and pride, rely on people's internal attributes (i.e., their own needs, goals, desires, or abilities) as the primary point of reference. Other-focused emotions, such as sympathy, caring and solidarity, in contrast, reflect a concern for others and are more likely to guide prosocial behaviours (Markus & Kitayama, 1991).

Sympathy is a feeling of concern for another's distress or misfortune that often derives from the comprehension and empathic sharing of others' negative affective state (Eisenberg et al., 2000). A body of literature shows a strong linkage between sympathy and prosocial behaviours such as helping and donation (Luberto et al., 2018). People who feel bad for others are often motivated to act to alleviate the distress they perceive in others (Staub, 1991). For example, Eisenberg et al. (1989) used multiple measures to capture the degree to which one feels sympathy for others, including facial expression, physiological index (e.g., heart rate), and self-report surveys. Consistently, each measure was shown as a strong predictor of prosocial behaviours. In laboratory settings, sympathy manipulated by emotion dissonance also demonstrated a positive relationship to the willingness to help, measured as both donation intention and actual monetary donation (Park, Hyun, & Jhang, 2019).

Together, a comprehensive meta-analysis (Luberto et al., 2018) showed that sympathy is positively related to both self-reported and observed prosocial behaviours (i.e., helping behaviours in real-world and simulated settings). In this study, we capture American citizens' general feelings of sympathy about the COVID-19 pandemic and explore its association with prosocial behaviours both before and after community transmission began in the United States. Based on the theoretical arguments and empirical evidence above, we hypothesize that:

H2. Individuals with higher level of sympathy are more willing to provide aid.

4 | COMPASSIONATE GOALS, SYMPATHY, AND PROSOCIAL BEHAVIOURS

Although an overall positive impact of compassionate goals and sympathy on prosocial behaviours can be expected based on existing literature, few studies have addressed the relationship between these motivational and emotional processes. In this study, we expect that compassionate goals will influence sympathy, which subsequently predict prosocial behaviours.

Appraisal theories suggest that emotion is the outcome of one's subjective evaluation of a situation and the motivational mechanisms that guide adaptive responses (Lazarus, 1991). When people recognize that the outcome of a behaviour is relevant to their goals, they will experience specific emotions (Lazarus, 1991). The goal appraisals include goal relevance, goal congruence, and ego-involvement. For instance, if one sees a situation as goal relevant yet goal incongruent, but has no strong ego-involvement, both fear and hope are likely to ensue (Nabi & Myrick, 2019).

Consistently, research shows that interpersonal goals influence people's mental construal of others in relation to the self, which in turn shapes affective experiences (Crocker & Canevello, 2015). Ecosystem theory predicts that compassionate goals foster a mindset where people feel cooperative with others, which promotes feelings of social ease and connection (e.g., connected, peaceful, and loving; Canevello & Crocker, 2017). That is, people with high compassionate goals are more likely to see others as collaborators, which subsequently can lead to prosocial feelings.

Empirical evidence supports this assumption, showing that compassionate goals correlate with feeling connected to others (Crocker & Canevello, 2008, 2012). Indeed, previous studies indicate that compassionate goals are specifically associated with affective states that signal a sense of belonging and other-focused emotions (Canevello & Crocker, 2017). Compared to people who primarily focus on their own need and experience, individuals with high compassionate goals are more likely to step out of themselves, recognize others' suffering, and extend compassion towards others (Neff & Pommier, 2013). Thus, we expect people with high compassionate goals to be more likely to experience goal-congruent emotions, such as sympathy:

H3. People with high compassionate goals are more likely to experience sympathy during the COVID-19 pandemic.

Taken together, with the protean nature of the COVID-19 pandemic, we also test whether prosocial emotions mediate the relationship between compassionate goals and prosocial behaviours. We thus propose a final mediation hypothesis:

H4. Sympathy will mediate the relationship between compassionate goals and willingness to aid.

5 | STUDY 1

Before the widespread community transmission began in the United States, COVID-19 cases were mostly concentrated in China. During the outbreak, China endured drastic shortage in medical supplies and other goods (Harney, 2020). Americans were encouraged to engage in prosocial behaviours such as donating money and supplies (Centers for Disease Control and Prevention, 2020). Under this backdrop, Study 1 was conducted at the end of February 2020 to examine the role of compassionate goals and sympathy in motivating Americans to help people in China. We expect people with high compassionate goals to experience more sympathy towards out-group members (i.e., people in China) and report higher helping intentions.

5.1 | Methods

Procedure. We collected data at the end of February 2020, when COVID-19 cases were largely concentrated in China. Data were collected from an adult sample ($N = 943$) recruited through Amazon's Mechanical Turk (MTurk). Participants who completed the survey received \$1. Informed consent was obtained at the beginning of the study and all research procedures were approved by the IRB at the authors' institution.

Sample. Our sample was gender balanced (49.1% females), predominantly White (73.9%), and the average age was 40.5 ($SD = 12.94$). About 42.3% of our participants have received a 4-year college degree, and the median household income was in the bracket of \$50,000–\$74,999. Regarding political ideology (1 = *strong liberal*; 7 = *strong conservative*; $M = 3.65$, $SD = 1.80$), participants reported relatively moderate political ideology related to social issues ($M = 3.48$, $SD = 1.89$) and economic issues ($M = 3.81$, $SD = 1.91$).

5.2 | Measures

Compassionate goals were measured with four items adapted from Crocker and Canevello (2008). The items were modified to assess participants' goals towards people who were suffering from COVID-19. These items are 'I want/try to be supportive of people who are affected by COVID-19', 'I want/try to have compassion for those suffering from COVID-19', 'I want/try to avoid neglecting people who are affected by COVID-19', and 'I want/try to make positive difference in people who may be impacted by COVID-19' (1 = *strongly disagree* to 5 = *strongly agree*, $\alpha = .81$, $M = 3.75$, $SD = 0.67$).

Sympathy was measured on a scale ranging from 0 = *none of this feeling* to 5 = *a lot of this feeling* ('How do you feel about the coronavirus pandemic?' $M = 3.22$, $SD = 1.40$).

Willingness to aid was assessed with three items adapted from Yang (2016). These items include: 'I am willing to donate money or supplies to aid the response to the coronavirus outbreak', 'The U.S. government should send medical experts to China to provide aid', and 'I would encourage my family and friends to donate money or supplies to aid the response to the coronavirus outbreak' (1 = *strongly disagree* to 7 = *strongly agree*, $\alpha = .81$, $M = 4.55$, $SD = 1.42$). Correlations among the variables are reported in Table 1.

5.3 | Results

To validate our measurement model, we examined a series of CFA models where we specified either three factors (i.e., compassionate goals, sympathy, and willingness to aid) or allowed the constructs to load on one or two factors. The three-factor model showed superior fit to the data ($\chi^2 = 82.91$, $df = 18$, $\chi^2/df = 4.61$, RMSEA [90% C.I.] = 0.06 [0.05, 0.08], SRMR = 0.04, CFI = 0.97, TLI = 0.96) as compared to the other models. Furthermore, all factor loadings

TABLE 1 Zero-order correlations among key variables in Study 1

Variables	M (SD)	1	2	3	4	5	6	7
1. Compassionate goals	5.16 (1.05)	—						
2. Willingness to aid	4.55 (1.42)	.58***	—					
3. Sympathy	6.89 (2.60)	.53***	.46***	—				
4. Age	40.50 (12.94)	.04	-.08*	.09**	—			
5. Income	5.50 (2.03)	.02	.05	.03	.07*	—		
6. Education	4.41 (1.30)	.08*	.12***	.02	.04	.33***	—	
7. Ideology	3.65 (1.80)	-.19***	-.18***	-.18***	.09**	.07*	-.01	—

* $p < .05$; ** $p < .01$; *** $p < .001$.

in the CFA model were above 0.50, which demonstrated good convergent and discriminant validity (Gefen, Straub, & Boudreau, 2000).

To test our hypotheses, a mediation model predicting willingness to aid was analysed with structural equation modelling (see Figure 1 for results). We included demographic variables as covariates. Bootstrapped mediation analyses were conducted with 5,000 randomly generated sub-samples. Our model showed overall good model fit to data, $\chi^2 = 242.66$, $df = 60$, $\chi^2/df = 4.04$, RMSEA [90% C.I.] = 0.06 [0.05, 0.07], SRMR = 0.05, CFI = 0.95, TLI = 0.93. Results are reported in Table 2. Specifically, compassionate goals were significantly related to sympathy ($\beta = .59$, $t [917] = 12.12$, $p < .001$), and sympathy was significantly related to willingness to aid ($\beta = .15$, $t [916] = 3.31$, $p = .001$). The indirect link between compassionate goals and willingness to aid through sympathy was also significant ($\beta = .09$, 95% CI = [0.05, 0.21], $p = .001$).

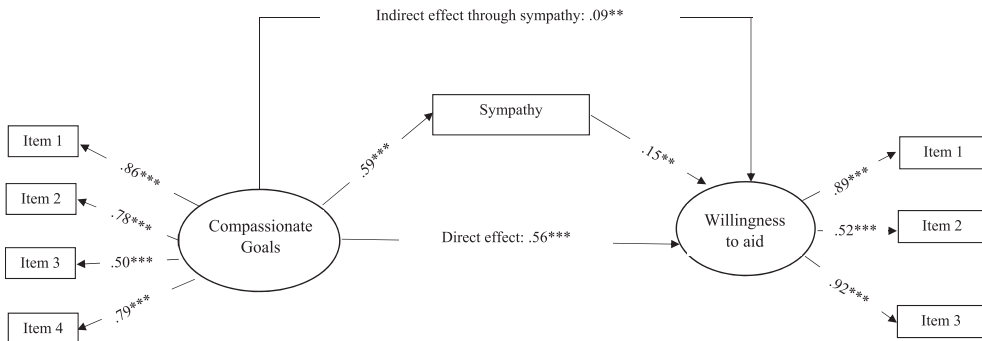
5.4 | Discussion

Consistent with our hypotheses, during the early stage of the COVID-19 pandemic, people with high compassionate goals were more likely to feel sympathy towards those suffering from COVID-19 in China, and subsequently were more willing to provide aid. Over 72% of our participants showed moderate to high level of sympathy (scored higher than 3 on a six-point scale). Study 1 documented the early responses of Americans and was among the first to reveal motivational factors behind prosocial behaviours at the early stage of the COVID-19 pandemic.

Study 1 has several limitations. First, although MTurk has been widely used in social science research and is considered a valid tool for participant recruitment (Stewart, Chandler, & Paolacci, 2017), MTurk samples are not representative of the U.S. adult population, especially with regards to health-related beliefs and behaviours (Walters, Christakis, & Wright, 2018). Soon after Study 1, the COVID-19 pandemic began to spread quickly across the United States. It is possible that people's prosocial emotions have shifted from sympathy towards out-groups to sympathy and solidarity towards their compatriots.

6 | STUDY 2

To address the limitations of Study 1, we conducted a follow-up study in early April 2020, when COVID-19 became a much more relevant concern to Americans. In early April, the United States became the epicentre of the



Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standardized coefficients are reported.

FIGURE 1 Structural equation modelling results for Study 1. Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standardized coefficients are reported

TABLE 2 Structural equation modelling results for Study 1

Variable	Estimate B	Standardized coefficients β	SE	95% CI		p
				LL	UL	
<i>Dependent variable: Sympathy^a</i>						
Compassionate goals	1.47	.59***	.08	1.32	1.63	<.001
Age	.01	.07*	.01	.003	.03	.02
Income	.04	.03	.04	-.03	.10	.31
Education	-.05	-.03	.05	-.16	.05	.34
Gender	.33	.07*	.14	.06	.62	.02
Ethnicity	-.15	-.03	.28	-.69	.43	.60
Race	-.04	-.02	.08	-.19	.12	.64
Ideology	-.11	-.08*	.04	-.19	-.03	.01
<i>Dependent variable: Willingness to aid^b</i>						
Compassionate goals	.83	.56***	.07	.70	.97	<.001
Sympathy	.09	.15**	.03	.04	.14	.001
Age	-.02	-.13***	.004	-.02	-.01	<.001
Income	.01	.01	.02	-.04	.05	.73
Education	.08	.07*	.04	.01	.15	.02
Gender	-.12	-.04	.09	-.29	.06	.18
Ethnicity	-.46	-.13**	.16	-.78	-.13	.004
Race	-.09	-.09	.05	-.18	.01	.06
Ideology	-.02	-.03	.03	-.07	.03	.35
Indirect link: Compassionate goals → sympathy → willingness to aid	.13	.09**	.04	.05	.21	.001

Abbreviations: CI, confidence interval; LL, lower limit; UL, upper limit.

^aOur model accounted for 36.9% of the variance in sympathy.

^bOur model accounted for 45.8% of the variance in willingness to aid.

Significant standardized coefficients are reported in bold.

* $p < .05$; ** $p < .01$; *** $p < .001$.

COVID-19 pandemic, with over 210,000 confirmed cases and 4,500 deaths (Centers for Disease Control and Prevention, 2020). In Study 2, we recruited a nationally representative sample through *Ipsos Public Affairs* and included another prosocial emotion—solidarity.

Previous research shows that disasters thrust people into a situation where their suffering is shared by others. Individuals, in turn, have more opportunities to establish deeper connection, mutual help, and form solidarity—a feeling of closeness or bonding with one another (Dangi, 2018). For example, in the wake of the 1989 Loma Prieta earthquake, individuals continued to talk about the disaster 2 weeks later (Pennebaker & Harber, 1993). Similarly, among Spaniards following the 2004 terrorist bombing in Madrid, information sharing during the first week after the attack led to an increase in feeling solidarity and social support even 7 weeks later (Páez et al., 2007).

The feeling of solidarity likely promotes prosocial behaviours through the sense of ‘we-ness’ (Solnit, 2009). ‘We-ness’ can be conceptualized as an emergent shared social identity, largely due to the sense of common fate in relation to the crisis/disaster (Drury, Cocking, & Reicher, 2009). Thus, individuals become more concerned about others’ well-being and engage in more prosocial behaviours because the distinction between ‘them’ and ‘us’

becomes less clear (Drury et al., 2009). We expect that when COVID-19 is more prevalent in the United States, people will experience a heightened sense of solidarity, which will push communities to engage in more prosocial behaviours (Páez et al., 2007; Solnit, 2009).

Given that compassionate goals also include a focus on others' well-being (Crocker & Canevello, 2008), we suspect that individuals with higher compassionate goals are more likely to experience solidarity as this emotion is in line with their general interpersonal goals. Therefore, in Study 2, we sought to conceptually replicate Study 1 while integrating solidarity as a second mediator, in addition to sympathy.

6.1 | Sample

We contracted *Ipsos Public Affairs* to recruit a nationally representative sample of American adults ($N = 1,009$). Our data collection took place from 27 March to 8 April 2020. Ipsos Knowledge Panel® is the largest probability-based online panel in the United States and provides a statistically valid representation of the U.S. population, including many difficult-to-reach populations. We obtained informed consent at the beginning of the study and IRB approval from the authors' institution.

Our sample was gender balanced (51.6% females), mostly White (63.1%), and the average age was 48.03 ($SD = 17.88$). About 42.7% of the participants were not employed. Approximately 33.3% received a 4-year college degree or higher, 27.8% received some college degree, 28.3% received high school degree, and 10.6% received less than high school degree. The median household income was in the bracket of \$75,000–84,999. Regarding political ideology (1 = *strong liberal*, 7 = *strong conservative*, $M = 4.11$, $SD = 1.56$), 39.1% were independent, followed by 34.2% liberal, and 26.3% conservative.

6.2 | Measures

Compassionate goals ($\alpha = .81$, $M = 4.24$, $SD = 0.74$) were measured the same way as Study 1. To unify measurement scale with other items in the survey, *sympathy* ($M = 3.81$, $SD = 1.28$) and *solidarity* ($M = 3.17$, $SD = 1.42$) were measured on a scale from 0 = *none of this feeling* to 5 = *a lot of this feeling*. *Willingness to donate* was measured with one item: 'If you were to receive the \$1,200 stimulus payment, how much of it would you be willing to donate to aid the response to COVID-19' ($M = 249.28$, $SD = 336.59$). Correlations between the variables are reported in Table 3.

TABLE 3 Zero-order correlations among key variables in Study 2

Variables	M (SD)	1	2	3	4	5	6	7	8
1. Compassionate goals	4.24 (0.74)	—							
2. Donation	249.28 (336.59)	.10**	—						
3. Sympathy	3.81 (1.28)	.37***	.09**	—					
4. Solidarity	3.17 (1.42)	.20***	.12***	.41***	—				
5. Age	48.03 (17.88)	.04	.05	.12***	.11*	—			
6. Income	13.24 (4.59)	.11***	.24***	-.09**	.03	-.04	—		
7. Education	2.84 (1.01)	.17***	.15***	.04	.07*	.02	.43***	—	
8. Ideology	4.11 (1.56)	.07*	.06	.08*	.13***	.02	.04	.02	—

* $p < .05$; ** $p < .01$; *** $p < .001$.

6.3 | Results

Similar to Study 1, we validated our four-factor CFA model by comparing model fit to alternative models with fewer factors. The four-factor measurement model ($\chi^2 = 30.83$, $df = 11$, $\chi^2/df = 2.80$, RMSEA [90% C.I.] = 0.04 [0.03, 0.06], SRMR = 0.02, CFI = 0.99, TLI = 0.97) demonstrated the best model fit. In addition, all factor loadings were above 0.50, which demonstrated good discriminant and convergent validity (Gefen et al., 2000).

The structural model, which simultaneously estimated the potential mediation effect of sympathy and solidarity ($\chi^2 = 165.79$, $df = 39$, $\chi^2/df = 4.25$, RMSEA [90% C.I.] = 0.06 [0.05, 0.07]), SRMR = 0.04, CFI = 0.95, TLI = 0.90), both demonstrated good fit to the data. Path coefficients are reported in Table 4 and Figure 2. Specifically, compassionate goals were significantly related to both sympathy ($\beta = .33$, $t [933] = 6.16$, $p < .001$) and solidarity ($\beta = .19$, $t [916] = 4.35$, $p < .001$). The relationship between solidarity and donation intention was significant ($\beta = .08$, $t [916] = 2.48$, $p = .01$). The indirect relationship between compassionate goals and donation through solidarity was also positive and significant ($\beta = .02$, 95% CI = [0.004, 0.04], $p = .03$). However, sympathy was not a significant predictor of donation, $\beta = .05$, $t (916) = 1.47$, $p = .15$. The indirect relationship through sympathy was also not significant, $\beta = .02$, 95% CI = [-0.01, 0.06], $p = .17$.

6.4 | Discussion

Our follow-up study with a nationally representative sample replicated Study 1 results, in that people with high compassionate goals were more likely to feel sympathy and solidarity towards others during the COVID-19 pandemic. However, although solidarity mediated the relationship between compassionate goals and donation, sympathy was not a significant mediator.

7 | GENERAL DISCUSSION

Integrating research on ecosystem theory and appraisal theories, this study examines how compassionate goals, as well as sympathy and solidarity, influence Americans' prosocial behaviours during the on-going COVID-19 pandemic. Our study contributes to the literature by examining the motivational and emotional processes in engendering prosocial behaviours both before and after the pandemic affected the United States. Although the link between compassionate goals and prosocial emotions seems to be robust, the role of compassionate goals and sympathy in promoting helping behaviour changed across studies. The sense of solidarity demonstrated a better explanatory power of donation intention than sympathy, when COVID-19 became more prevalent in the United States.

Consistent with previous research, compassionate goals are a significant predictor of prosocial behaviours in Study 1. That is, people with high compassionate goals are more inclined to help others in need. However, in Study 2, when we operationalized prosocial behaviour as willingness to donate from the stimulus payment, the link between compassionate goals and donation became insignificant. This result might be consistent with the notion that compassionate goals are 'not selfless, self-sacrificing, or self-disparaging' (Crocker & Canevello, 2012, p. 234). Rather, because the self is part of the ecosystem, the needs of the self are as important as the needs of others (Crocker & Canevello, 2012). When COVID-19 affected the inner community more, people were more inclined to engage in self-care. Our study supports the situational assumption of prosocial behaviours, suggesting that even for people with high compassionate goals, dire situations may suppress their intentions to help.

Similarly, sympathy is a significant predictor of prosocial behaviour in Study 1, which suggests that a disruptive event can trigger inter-communal emotions and expressions. That is, members of one community (i.e., the United States) express sympathy towards and support for members of an out-group community (i.e., China). Our findings suggest that stimulating the feeling of sympathy might be effective in promoting inter-communal prosocial

TABLE 4 Structural equation modelling results for Study 2

Variable	Estimate B	Standardized coefficients β	SE	95% CI		p
				LL	UL	
<i>Dependent variable: Sympathy^a</i>						
Compassionate goals	.58	.33***	.09	.40	.77	<.001
Age	.01	.10**	.003	.003	.013	.004
Income	-.03	-.10**	.01	-.06	-.02	.005
Education	.09	.06	.05	-.01	.19	.09
Gender	.37	.14***	.08	.20	.53	<.001
Ethnicity	-.09	-.03	.10	-.28	.10	.35
Employ	.05	.02	.09	-.13	.24	.57
Ideology	.04	.05	.03	-.01	.09	.09
<i>Dependent variable: Solidarity^b</i>						
Compassionate goals	.36	.19***	.08	.20	.52	<.001
Age	.01	.11**	.003	.003	.015	.003
Income	-.01	-.02	.01	-.03	.02	.66
Education	.13	.09*	.05	.03	.23	.02
Gender	.23	.08*	.09	.05	.40	.01
Ethnicity	-.20	-.06	.11	-.40	.01	.07
Employ	.02	.01	.10	-.18	.22	.82
Ideology	.09	.10***	.03	.03	.15	.002
<i>Dependent variable: Donation^c</i>						
Compassionate goals	.07	.05	.05	-.03	.17	.14
Sympathy	.04	.05	.03	-.01	.09	.15
Solidarity	.06	.08*	.02	.01	.10	.02
Age	-.001	-.01	.002	-.01	.003	.75
Income	.05	.23***	.01	.04	.07	<.001
Education	.09	.09*	.04	.02	.16	.01
Gender	-.13	-.06*	.06	-.25	-.01	.04
Ethnicity	.05	.02	.07	-.08	.18	.43
Employ	-.26	-.13**	.07	-.41	-.12	<.001
Ideology	.03	.05	.02	-.01	.07	.09
<i>Indirect link:</i>						
Through sympathy	.02	.02	.012	-.01	.06	.17
Through solidarity	.02	.02*	.007	.004	.04	.03

Abbreviations: CI, confidence interval; LL, lower limit; UL, upper limit.

^aOur model accounted for 15.0% of the variance in sympathy.

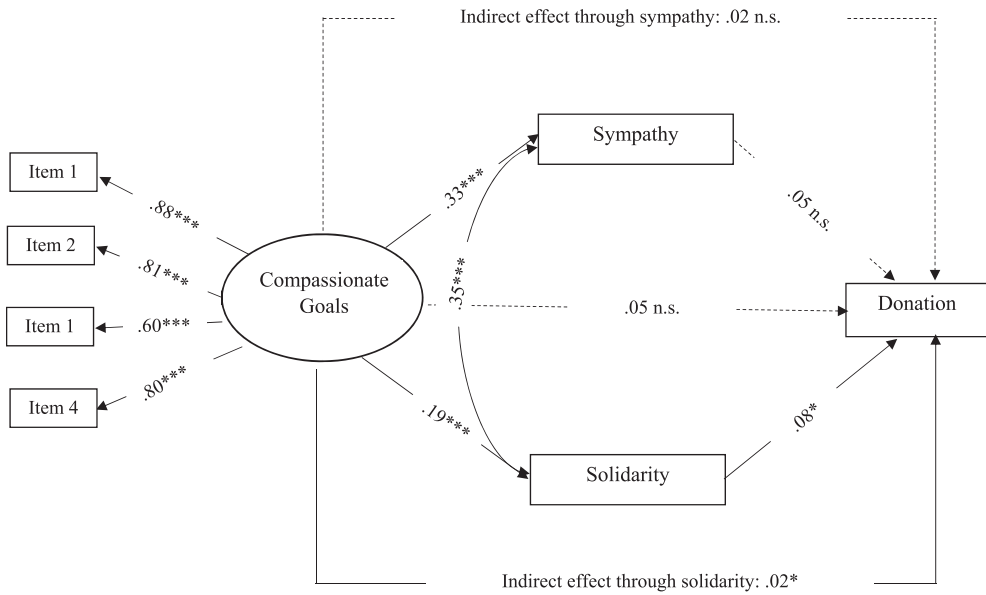
^bOur model accounted for 7.2% of the variance in solidarity.

^cOur model accounted for 10.8% of the variance in donation.

Significant standardized coefficients are reported in bold.

* $p < .05$; ** $p < .01$; *** $p < .001$.

behaviours. Specifically, research shows that exposure to mass media content that blames out-group victims is negatively associated with sympathy and helping intentions (Zagefka, 2020). Thus, future mass media campaigns should be strategic in portraying victims from out-groups.



Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standardized coefficients are reported.

FIGURE 2 Structural equation modelling results for Study 2.

Note: * $p < .05$, ** $p < .01$, *** $p < .001$. Standardized coefficients are reported

As COVID-19 began to influence the United States more, Americans experienced a higher level of sympathy: $M_{\text{Study 2}} = 3.81$ ($SD = 1.28$) versus $M_{\text{Study 1}} = 3.22$ ($SD = 1.40$), $F(1, 1937) = 95.5$, $p < .001$, which corroborates social identity theory (Tajfel, 1978); in that people often favour members of their own ethnic, racial, or linguistic group. However, sympathy was not a significant predictor of donation. This finding is contradictory to previous findings that sympathy is generally more effective in promoting in-group helping (Stürmer, Snyder, Kropp, & Siem, 2006). We suspect that one possible reason lies in the nature of the COVID-19 pandemic. When the pandemic affects one's inner community more, self-protection motivation may outweigh prosocial intentions. That is, although people still experience sympathy towards others, this prosocial emotion does not necessarily motivate them to help others because they need to ensure their own well-being.

Notably, the insignificant results in Study 2 may also indicate that when an actual dollar amount is attached with helping behaviour, additional considerations (e.g., one's own need to cope with the pandemic) may influence people's willingness to donate. In particular, when helping behaviour is portrayed in a more concrete manner in Study 2, as compared to the more abstract ways in Study 1, it makes sense that people will consider the feasibility of this action more than its desirability (Trope & Liberman, 2010). Other findings from this study also support this speculation. For example, income and employment status were the strongest predictors of donation amount, such that people who are employed and have higher income are willing to donate more. Future studies should examine both prosocial intentions and actual prosocial behaviours to better understand these discrepancies.

Importantly, solidarity is a significant mediator between compassionate goals and donation in Study 2. The significant mediating role of solidarity suggests that when a sense of common fate is established, people are likely to engage in more prosocial behaviours. In this situation, helping others is helping oneself. Our research indicates that when people become victims (vs. bystanders), establishing a sense of social bonding might be more effective in propelling them to help, as compared to simply making them experience others' distress. This is in line with emotional solidarity theory (Durkheim, 1995), which argues that affective bonds help unite individuals. This finding also has important practical implications. Previous studies showed that news reports highlighting collective (vs. individual) responsibilities in a crisis may elicit feelings of

solidarity (Ryan & Hawdon, 2008). To this end, our research indicates that media portrayal of victims during the pandemic is important to influence people's emotions, which can promote prosocial behaviours.

Interestingly, we found that people with high compassionate goals are more likely to feel sympathy and solidarity across both studies. This finding extends the literature on interpersonal goals and intra-psychic experience such as prosocial affect. As noted, compassionate goals shape emotional experience by influencing whether people see themselves and others as interdependent (Canevello & Crocker, 2017). When people have high compassionate goals, they view their relationships with others as collaborative and cooperative, which means they are likely to believe what is good for others is also good for the self. This mindset helps them recognize other's suffering regardless of group membership and cultivate a feeling of solidarity because of their shared fate. Future studies should further examine the interconnections among motivation, emotion, and behaviour.

This research has several limitations. First, the association between goals and emotions may exist in both directions. Our cross-sectional study is limited in drawing causal inference between compassionate goals and prosocial emotions. Additional longitudinal studies are needed to examine these mediation hypotheses. Also, we only examined two prosocial emotions (i.e., sympathy and solidarity), future research should also explore the impact of negative emotions such as fear, distress, and anxiety on prosocial behaviours. According to evolutionary theories, negative mood may signal difficulties with current goals, and foster shifts to more attainable and self-protective goals (Nesse & Ellsworth, 2009). Research shows that negative emotion might prompt a shift from compassionate goals to self-focus goals (Crocker & Canevello, 2015), which probably leads to less prosocial behaviour. Thus, examining the role of negative emotions on prosocial behaviour is critical in social crises.

In addition, we relied on self-report data to measure compassionate goals, emotions, and prosocial intentions. Although this approach is common in social science studies (e.g., PANAS scale, Watson, Clark, & Tellegen, 1988), there may be concerns with social desirability, self-deception, or inaccurate estimation (Van de Mortel, 2008). The one-item measures of sympathy, solidarity, and donation also result in limited reliability. Future research should consider including other methods such as observations or interviews to evaluate these constructs. In addition, we assumed that the target of prosocial behaviours naturally shifted from out-group members (Study 1) to in-group members (Study 2) with the progression of the COVID-19 pandemic. This assumption, however, was not directly measured.

In conclusion, our study shows that people with high compassionate goals are more likely to experience sympathy and solidarity during the COVID-19 pandemic. As the pandemic began to be more relevant to Americans, solidarity, rather than sympathy, fully mediated the relationship between compassionate goals and donation intention. Our study has theoretical implications regarding prosocial behaviours during disruptive event, as well as practical implications for understanding how interventions and communication messaging can generate prosocial support to others.

DATA AVAILABILITY STATEMENT

Data available on request from the authors—The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

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